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Some Legal and Illegal Aspects of Plastic Surgery

JACQUES W. MALINIAK, M.D.
New York, N. Y.

MAN'S inherent desire for miracles provides a rich soil for quackery. Gold stocks, love charms, elixirs of youth and health, are the wish-fulfillment dreams of waking life. The desire for beauty is implanted deep in every human heart; and few men—and almost no women—can resist the lure of the cream or medicament or operation which purports to transform the drab youth into a Prince Charming, the plain girl into a correspondingly lovely damsel. It is therefore not surprising that charlatany has always tagged at the heels of authentic procedures for the eradication of deformity.

The brazen quackery that has attended the development of modern plastic surgery can be attributed in no small part to the comparative newness of this specialty and the sensational nature of its accomplishments. Although reconstructive operations of one sort or another have been attempted since the dawn of civilization, it is only since the World War that plastic repair has taken its place among the full-fledged surgical specialties. Every new branch of medicine must pass through a period of semi-chaos until its boundaries are clearly

defined and the public understands its scope and requirements. In the interim the interlopers who hang about the fringe of healing rush in and reap a rich harvest.

A first step in the comprehension of the aims and potentialities of surgical reconstruction is an understanding of the procedures it embraces. Those who identify plastic repair with face-lifting and the correction of nasal malformations take a mistakenly narrow view of its scope. Plastic surgery deals with the repair of deformities of the skin and underlying soft tissues no matter where they occur on the body. In many instances, it attacks abnormalities of the bony framework too. Contrary to the popular notion, it does not limit itself to imperfections that merely detract from appearance but repairs many malformations that interfere with function. Its goal embraces normal physiology as well as normal anatomy.

In so diversified and new a field, there are naturally many angles that touch the law at one point or another. It is my belief that intelligent consideration of these

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moot points will help to clarify a situation in which confusion now reigns and establish more exact legal principles for application to plastic surgery.

At present the law is guilty of both sins of commission and sins of omission with respect to this specialty. It is too kind to the unqualified cosmetician and does not extend adequate protection to the reputable plastic surgeon who is made to suffer, in a number of small ways, for the transgressions of so-called beauty specialists.

Today curative medicine is fairly well defended against unauthorized healers but there is still a vast amount of "bootlegging" in the field of plastic repair. This is due in part to the boldness of "beauty institutes" in invading the legitimate province of medicine, in part to the indifference of those charged with enforcing the law to encroachments upon medical practice when purely cosmetic procedures are in question. There is no justification for this attitude. A quack can inflict as much damage in the performance of cosmetic surgery as during curative operations. Either comes within the scope of the Medical Practice Act and can be entrusted with safety to reputable physicians only.

A general practitioner or surgeon who wilfully and persistently engages in practices discarded and condemned by the rest of the profession speedily finds himself in conflict with the law. Today cosmeticians in every state of the Union are exposing individuals to the risks of discredited and dangerous methods without interference or rebuke from those charged with responsibility for the public health. As a result of this indifference on the part of the law, thousands of women and men are facing life disfigured and disabled through their misguided search for beautification or rejuvenation.

There are at least three procedures, in frequent use by irresponsible practitioners, that should be banned, if not by statutory enactment, then by heavy penalties for the damage they inflict. Until this is done, the unwary seeker after beauty stands in danger of losing her skin as well as her shirt!

This is literally true of attempts to "rejuvenate" the skin by peeling or shrinking. Powerful caustics cannot restore the vanished bloom of youth; but hundreds of thousands of dollars are spent annually on this painful and dangerous treatment. A powerful caustic, usually a carbolic acid derivative, is applied in a series of expensive treatments to remove the old "dead" skin and promote the growth of a new, unblemished dermal covering. What can be expected of this drastic procedure once the discoloration and swelling have subsided? If only the horny outer layer of the epidermis is removed, no lasting improvement is possible. Any injury or destruction of the underlying true skin results in scars.

The hair that graces a woman's head loses its allure on her face—and no price is considered too high for its removal. Unfortunately, the cost is not always solely monetary. The timid sex is rash beyond belief in the service of beauty and epilation by x-ray is one of the gravest dangers it encounters. The hair follicles are an integral part of the skin and no treatment administered to the dermis as a whole can destroy the hair cells without damaging the skin. X-ray will destroy the root of the hair—but it injures the cutis at the same time. The consequences may not be immediately apparent; but sooner or later atrophy and discoloration of the skin occur in the treated area.

The damages inflicted by caustic peeling of the skin

and the roentgenologic removal of superfluous hair are more than equalled by the dangers that attach to the use of so-called rejuvenating oils. A once distinguished actress vividly exemplifies the tragedy of paraffin injections.

Fourteen years ago this woman, then young and beau-



Fig. 1 (a)—Actress aged 36, who had paraffin injected between the eyes and cheeks twelve years previously to eradicate wrinkles. In less than three years the paraffin sagged from forehead, invading bridge of nose and causing a conspicuous hump. The patient was compelled to abandon a promising stage career because of unsightly appearance.

tiful, became obsessed with the idea that beginning wrinkles and depressions on her face and neck marred her appearance and threatened her professional success. With the unthinking rashness common to women on such occasions, she sought advice at the beauty parlor she had patronized for years. The wonders of paraffin injections were glowingly set forth by a physician associated with the place and "before and after" photographs were produced to dispel any lingering doubts. In a few minutes she had received a treatment which was to ruin her career and personal life. Three years later she was forced to abandon the stage because of the havoc wrought in her appearance by the accumulated paraffin. Sensitive about her disfigurement, she went into social retirement too and gradually sank into a state of profound despondency. Fourteen years after the injections which had produced such dire consequences, plastic surgery relieved her of her deformity to some extent. It could not restore the years of lost opportunity or obliterate the mental anguish through which she had gone.

This woman is one of thousands on the list of paraffin victims. Volumes could be written of the disfigurement and misery this treatment leaves in its wake. Depressions in the skin are temporarily obliterated and wrinkles partially effaced but the subsequent deformity is worse than any of the stigmata of age. In time the paraffin loses its original character and invades the surrounding tissues (Fig. 1).

This may happen two years after the injections or it may not happen for twelve—but happen it eventually does in most cases. The area swells and a hard lump forms under the inflamed and sensitive skin. Often

the condition spreads until the whole face is conspicuously disfigured. The only hope of relief lies in removal of the paraffin and this necessarily involves some scarring. Medical authorities are unanimous in condemning the use of "rejuvenating oils" for the eradication of wrinkles but less scrupulous members of the profession continue to ply the paraffin-laden syringe and women still subject themselves to its risks. The law

precautions for the safety of his patient, he should be held free from culpability, regardless of the outcome of the case.

This brings us to a very important point. What aberrations from the anatomic norm or the esthetic ideal



Fig. 1. (b)—Paraffinoma tumor removed from nasal bridge and glabellar region through endonasal incision. A few wrinkles were sufficient reason for this supersensitive woman to submit herself to a dangerous treatment which was to result in the ruin of her professional and personal life. The history given here is in contrast with the case described in Figure 2.

does nothing to hinder their activities, and organized medicine is powerless to act as those engaged in these practices are rarely affiliated with the official medical societies.

Although the correction of deformity of any kind falls within the statutory definition of the practice of medicine, in all too many instances the reparative surgeon goes into court without the moral sanctions that, in similar circumstances, surround the surgeon who has operated to eradicate disease.

Some years ago the French medical world was profoundly shocked by a verdict of eight thousand dollars against one of the most eminent surgeons of Paris. A young woman, offered the management of a large dressmaking house, had sought out the doctor in question because marked bow legs jeopardized her position. Moved by her predicament, he undertook the case without charge. Through no fault of his, postoperative gangrene set in and he was obliged to amputate a leg to save his patient's life. The Court conceded the good faith and technical skill of the physician but condemned him to pay a heavy indemnity because the original operation had not been performed to preserve life or restore health.

In this country most states protect the legitimate reconstructive surgeon from such a glaring miscarriage of justice but there is nevertheless a tendency to discriminate against him when operation is not necessitated by a morbid condition. This attitude is incompatible with an understanding of the psychic and social aspects of disfigurement. In the case that I have just described, the young woman applied for relief because the malformation of her limbs stood in the way of an excellent position with a high class dressmaking establishment. The surgeon undertook the operation, without pay, so as not to deny her the economic opportunity to which her ability entitled her but from which she was cut off by her deformity. There are thousands of comparable instances on record in the office of every plastic surgeon. Once a deformity has been diagnosed and social, psychic and economic reasons established for its correction, the plastic surgeon should stand in exactly the same light, before the law, as any other physician. If he has exercised reasonable skill and taken the usual

should be classified as deformities and when do they warrant surgical repair? Every one should agree that a cleft lip or a missing nose are serious malformations that should be corrected without fail. What of a marked asymmetrical hypertrophy of the breasts in a girl of eighteen, who is shut off from sports and social life by her deformity, or the premature signs of senescence in a woman of thirty-five whose livelihood depends upon the preservation of a youthful appearance? The legal definition of deformity should be clarified to establish more precisely the indications for surgical repair. In addition to malformations that impair function or gross disfigurements that clearly impede social and economic success, there are slight abnormalities whose influence on psychic health depends on individual temperament and mentality (Fig. 2).

What are the factors that determine whether or not reconstruction is warranted in these relatively slight disfigurements? Does the fact that a request for repair is made justify the plastic surgeon in consenting to operate in any and all cases?

It is generally conceded that surgery is not merely admissible but desirable in malformations that are repellent to the beholder or that interfere with the normal function of the affected part. A large, hairy mole that covers a child's cheek virtually cries aloud for removal. It is taken for granted, in acquired deformities, that every effort should be made to restore the original contour and appearance of the injured members. When a scar retracts the lip or turns out an eyelid or nostril, considerations of function add their weight to the esthetic arguments for repair even though the cicatrix in itself may be small.

It is in relatively slight disfigurements that are not conspicuous objectively that the establishment of a diagnosis of deformity presents difficulties. There is no physical malformation that does not produce a corresponding psychic disturbance, varying in degree with the individual temperament. It may be a mere reasoned regret that does not interfere with normal life or it may reach the proportions of an actual obsession. A flaw that is not perceptible to others does not justify the risks of operation no matter how large it looms in the eyes of its possessor. The greater the disparity between the conspicuousness of a blemish and the subjective reaction it produces, the less advisable surgery. When, on the other hand, the consciousness of deform-

ity is proportioned to the actual abnormality, then the reconstructive procedure not only corrects the physical anomaly but relieves the accompanying psychic maladjustment. It is therefore essential, in the lesser deformities, for an accurate psychological appraisal of



Fig. 2.—Man aged 28 with an extensive hemangioma involving entire left cheek and upper lip. The tumor, which started in infancy, gradually increased in size and no attempt was ever made by the parents to have the condition remedied. When I saw him for the first time in my service two years ago he was reluctant to undergo surgical treatment and apparently quite indifferent to his appearance, although he was never able to secure employment because of his repulsive disfigurement.

The interest in this case lies in the contrast between the reaction of the supersensitive individual to minor deformity (Figure 1) and the complete lack of it in this case where there is real need for repair.

the patient to be made before the decision to operate is reached. The surgeon must inquire into the motives underlying the request for repair. Upon their soundness or triviality the ultimate judgment must often rest. Sometimes the inherent psychic instability does not reveal itself until after operation. In such cases it is best to call a halt without delay. Further surgery will improve neither the physical aspect nor the mental outlook; each successive operation supplies new food on which the obsession grows.

A tragic case in point is that of a young woman of twenty-four, an actress, who had an operation performed by a qualified surgeon for a slight deformity of the nose. Following repair, she was seized with the idea that her previously negligible disfigurement had been accentuated. Her obsession grew to such a point that she refused to go out during the day without a heavy veil. As she told her story to me several months after operation, her evident anguish was in striking contrast to the testimony of her face. The nose was a trifle shorter than the dimensions of the ideal profile but the imperfection was not conspicuous; in fact, the face had a certain charm. When I expressed this opinion and refused to operate, her response was a violent outburst, tears mingling with accusations of ignorance and misjudgment. Two years later she returned with a bandage across the bridge of her nose. In the interval she had undergone six operations in the vain hope

of remodeling the nose to her satisfaction. Her surgeons varied from quacks selected from newspaper advertisements to men of deserved eminence who had apparently tried to undo the damage inflicted by others. Her appearance was pathetic. With indescribable naïveté she confided to me that she had sued all of her previous surgeons for malpractice and in the same breath urged me to "try my luck." Needless to say, I refused: it was only too plain that she belonged in a psychopathic ward rather than an operating room. She is probably still "shopping" for plastic surgery—and, what is worse, getting it!

At the opposite end of the pole is a case, reported by a well known surgeon before a large medical society, in which the refusal to operate for a conspicuous malformation produced highly tragic consequences. Some years previously, before plastic surgery had achieved the prestige which it enjoys today, the doctor in question had been consulted by a boy of twenty-two who desired repair of the aftermath of an old nasal fracture sustained at college while playing football. Mindful of the teachings of the times, the surgeon reminded the lad that beauty is only skin deep and admonished him to seek success through the sturdy virtues. The boy returned a second time, frantic with despair, and pleaded for relief from his deformity. Again the surgeon refused. A week later the youth committed suicide.

It may be argued that a psychopathic tendency must have been present for a young man to take his life for such a reason. In return one might ask how many girls and boys are entirely stable during the sensitive, emotional years of adolescence and the early twenties. Admittedly suicide is an extreme step and a stronger character would have reacted otherwise to a malformed nose; but the fact remains that deformities are frequently present in people who have not the normal strength to cope with them and who yet have a right to a full and happy life. In the case in question, with a real deformity present and no psychic aberration other than a hypersensitivity which is not unusual, corrective surgery would undoubtedly have revolutionized the unhappy youth's outlook and started him on the road to normal thinking and feeling. In happy contrast to these regrettable failures to make a proper diagnosis (in the one case of a psychosis, in the other of a correctible deformity), are the many cases in which a satisfactory decision is reached and operation relieves the psychic as well as physical abnormality. A psychiatric examination is invaluable in doubtful cases in which the malformation is visible but slight and the objective reasons for repair are not clearly defined.

Naturally these diagnostic suggestions cannot and should not be given statutory force. Once they are generally understood by the medical profession, however, and it is recognized that a deformity must be diagnosed from something more tangible than the subjective reaction of the patient, the indications for plastic surgery will be clearer and many unnecessary operations will be eliminated. Furthermore, a moral force will attach to justifiable reconstructive operations that must make itself felt in the courtroom when the charge of malpractice is raised against a reputable surgeon.

There are three distinct types of malpractice actions; and separate considerations enter into each one. In the

first, surgery has effected a definite improvement in the appearance of the patient but the latter's expectations of perfection have not been realized and he or she seeks consolation in a raid on the surgeon's purse. I myself was the defendant in a very interesting case of this sort. The patient, a woman of about thirty-five, had had paraffin injected into her face at the age of eighteen for the eradication of wrinkles around the mouth and correction of a nasal malformation. Ten years after the injection, which was performed by a widely advertised beauty institute on Broadway, the treated area became swollen and distorted and the skin was perceptibly reddened. In the intervening period she had been very successful in the operation of a millinery and dress shop. As the consequences of the paraffin injections manifested themselves, she became painfully conscious of the repellent appearance of her face and felt that it interfered appreciably with her business and social activities.

When I first saw her she had lumps underneath the skin throughout the entire thickness of the cheeks and a definite deformity of the nose from the same cause. Paraffin masses bulged beneath the buccal mucous membrane and interfered with mastication. I told her that a number of operations would be necessary to remove the paraffin from her face. She did not mention to me at the time (what I later learned when the skin failed to heal properly) that she had had applications of x-ray for the removal of superfluous hair from the cheeks.

As I look back upon this episode, I realize that the mental attitude displayed by this woman should have warned me against surgery. She was depressed and supersensitive and had given up business and social activities because of her appearance. She visited and telephoned me daily and dwelt much upon her past beauty—although early photographs revealed no great comeliness.

However, a marked correctible deformity did exist; the patient was warmly recommended by a prominent rhinologist who had known her for years—and I undertook the case. The paraffin was removed from the cheeks and nose in a series of operations and the depressions thereby created were filled in with fascia-fat grafts. The grafts were inserted through a small incision, about $1\frac{1}{2}$ inches long, in each nasolabial fold; and these two incisions comprised the basis of the lawsuit which she subsequently brought for "disfigurement."

Here was a woman whose appearance had been vastly improved by corrective surgery, who was fortunate enough to obtain normal healing although she had an atrophic condition of the skin from a low-grade x-ray burn in addition to her paraffinoma—but who sued on the strength of two small scars because her unrealizable hopes of perfect beauty had failed her. The ostensible grounds of the suit were an alleged breach of contract: the patient claimed that she was promised that she would have no scars and would be made beautiful. The final ironic touch is that the scars on the side of the mouth could have been removed—but that she kept them as evidence for the two years preceding the trial. When the case finally came up before the Supreme Court for a hearing it was dismissed; and the Court of Appeals, to which she then carried it, issued a verdict in my favor. Had I properly appraised the psychic make-up of this patient when she first came to me, I would have been spared a vast amount of worry and aggravation and saved many valuable days for more constructive purposes.

Such cases are not uncommon, due to the psychic instability of many applicants for plastic repair and the

difficulty of detecting the emotional aberration in some. In the particular instance that I have just described, the woman was otherwise intelligent and had achieved a genuine success in her work.

A different situation is presented when the surgeon has failed to effect a marked improvement, due either



Fig. 3.—Young woman showing condition of lip twenty-five years after a number of unsuccessful attempts at repair for unilateral cleft lip. The devastating effect of an improperly repaired cleft lip in infancy is clearly evidenced in this case. There is no excuse today for postoperative disfigurement such as this, considering the reconstructive methods at our disposal.

to some constitutional idiosyncrasy in the patient or to an inherent and insurmountable difficulty in the case itself. Sometimes not only is the deformity uncorrected but complications arise, producing additional disfigurement and resulting perhaps in disability or death (Fig. 3). In such cases, if the surgeon has made the usual provisions for his patient's safety and exhibited the average skill of his profession, he should be surrounded with the same safeguards as protect curative surgery. Once a diagnosis of deformity is properly established and a recognized procedure is employed to correct it, with due regard for all reasonable precautions, the surgeon should be held blameless for an adverse result regardless of the purpose of the operation. The psychic, social and economic values of plastic surgery are as important to personal welfare as the physical values represented by a tonsillectomy or a prophylactic appendectomy.

Juries take cognizance of the disrupting influence of deformity on happiness and success, in the enormous awards they often make in industrial cases and other negligence actions in which a claim of permanent disfigurement is made. Women whose faces are scarred can sometimes retire for life on the proceeds of sympathetic evaluation of the consequences of deformity. Shyster lawyers have built up a highly lucrative business on this foundation; and millions of dollars are paid out for so-called permanent disfigurement as a result of cuts, burns, lacerations and scalds, when plastic surgery could have prevented or minimized the deformity.

At first hand it is the insurance companies who pay these exaggerated indemnities. Indirectly the money comes out of the pockets of any one carrying a liability policy of any kind. It seems the most obvious sort of common sense that awards in such cases should be made only



Fig. 4.—Man aged 28, showing condition three weeks after injuries to the face sustained in an elevator crash. The major portion of the nose was detached and displaced laterally, forming adhesions with left eyelid and cheek, with resultant ectropion of lower lid. The fractured bones and septum were displaced into the nasal cavities, causing obstruction. No emergency repair was done at the municipal hospital where he was taken immediately after the accident.

The plastic repair of the face and reestablishment of the nasal passages required seven operations, extending over a period of months. A great economic loss was suffered by the community and the insurance companies who in the final count were called upon to foot the bill, which amounted to a small fortune. This case is only one of many thousands where lack of proper emergency repair causes unnecessary suffering and great economic loss.

after expert repair of the injury has accomplished all it can. No one would attempt to evaluate the functional loss from a fracture until the latter had been set. It is just as unreasonable to try to estimate the consequences of disfigurement before correction has been attempted. When a case comes to trial before the potentialities of repair have been realized, judge and jury should be guided by the testimony of a competent plastic surgeon as to what can be expected of operative reconstruction in the given condition.

The significance of scarring, in particular, should be made clear. A clever lawyer can win wholly disproportionate sums from a jury by adroit use of the word scar. The possibilities of scar removal should be given due weight in every case in which the claim for damage rests on this ground. In this connection it may be stated, as a fact of great importance, that immediate plastic repair of injuries would in many instances prevent deformity and obviate subsequent lawsuits involving vast sums of money (Fig. 4).

Summarizing the principal legal considerations that enter into the practice of plastic surgery, it seems plain that more vigorous action should be taken against both the lay cosmeticians who encroach upon the medical

field and those so-called beauty specialists, protected by an M.D., who usually work in association with beauty parlors and employ risky procedures that have been condemned by the responsible majority of the medical profession.

On the other hand, greater protection should be given the reputable plastic surgeon who employs recognized procedures for the correction of cosmetic and functional malformations. To this end, the diagnosis of deformity should be more precisely established with due regard for physical, psychic, social and economic factors. Once a proper diagnosis of deformity has been made, the surgeon who displays average skill and takes reasonable precautions for the safety of his patient should be protected against malpractice actions even if the end result is unsatisfactory.

In many industrial and negligence actions, exaggerated awards are made for so-called permanent disfigurement when plastic surgery could remove or minimize the deformity. Indemnity should be granted in such cases only after expert repair has accomplished all it can.

It is unfortunately true that the rank and file of neither the medical nor the legal profession is particularly interested in the legal aspects of plastic surgery or the still vague medicolegal principles that govern litigation arising out of this specialty. An organization like this, with a membership recruited from both professions, is perhaps better equipped than any other group to help clarify the status of plastic surgery and the plastic surgeon under the law. A more precise understanding, among lawyers as well as doctors, of the indications for surgical repair and its great potentialities would materially advance human happiness and justice.

1125 Park Avenue.

Purpura Haemorrhagica with Cerebrospinal Hemorrhage

ARTHUR J. GEIGER, New Haven, Conn. (*Journal A. M. A.*, March 31, 1934), reports two cases of hemorrhagic purpura in one of which it seems probable that the bloody spinal fluid obtained by lumbar puncture during the first hospital admission arose from meningeal bleeding. The sudden development of hemiplegia associated with recurrence of active purpura some months later suggests that an extensive hemorrhage occurred within the cerebrum at this time. In the other case the period of observation was unfortunately too brief for satisfactory neurologic study, but the coma, convulsions and rapidly fatal course in the absence of localizing signs suggests either an intracerebral or a large subdural hemorrhage. Although cerebrospinal hemorrhage in purpura usually implies a fatal prognosis, recovery from even large hemorrhages has been reported before. Recoveries seem commonest in the "meningitic group"; none have been noted in the group with hemiplegia.

Dysentery: Report of Three Cases in One Family Due to Atypical *Bacillus Dysenteriae* and *Endamoeba Histolytica*

HERBERT L. WEINBERGER, New Orleans (*Journal A. M. A.*, March 24, 1934), presents three cases of amebic dysentery in which infection occurred in Chicago and believes that the possible cause for the failure to find *Endamoeba histolytica* early in the recently reported fatal cases of acute dysentery in the late epidemic was the relatively long incubation period of this parasite. *Bacillus dysenteriae*, described by Schorer and Duval in 1904, was isolated in the author's cases sixty days before the discovery of *Endamoeba histolytica*. Vaccine made from the isolated *Bacillus dysenteriae* proved effective in the treatment of these cases, resulting in complete abatement of signs and symptoms until relapse, at which time *Endamoeba histolytica* was found. *Endamoeba histolytica* was discovered sixty days after the acute onset. The combination of emetine and chiniofon, proved effective against the amebiasis. In every case of acute colitis, the possibility must not be overlooked of the presence of double infection, especially the association of *Endamoeba histolytica* with one of the *Bacillus dysenteriae* group.

The Treatment of Fractures of the Nose

GERARD H. COX, M.D., F.A.C.S.

Glen Cove, New York

WITH the constant increase in the number of automobile accidents, fractures of the nose are becoming more and more frequent, not only in the cities, but also in the suburban and rural communities. For example, in the rhinoplastic service of Bellevue Hospi-



Fig. 1.—Recent fracture of nasal bones, before correction.

tal, we treat two or three recent fractures each week, or a total of from one hundred to two hundred such cases a year.

The framework of the nose is composed of a bony and cartilaginous portion. The bony parts are formed by the two nasal bones, which articulate with each other in the mid-line, and are attached to the frontal bone above. On each side of the nasal bones, we have the nasal process of the superior maxilla. In the mid-line is the nasal septum, partly bone (perpendicular plate of the ethmoid) and partly cartilage. The alar cartilages support the lower lateral structure of the nose.

RECENT FRACTURES OF THE NOSE

Fractures of the nose may be divided into:

1. fracture of the nasal bones
2. fracture of the nasal processes of the superior maxillæ
3. fracture of the nasal spine
4. fracture of the articulation of the nasal bones with the frontal process
5. fracture-dislocation of the septum

Nasal fractures may also be classified as linear, comminuted or depressed fractures. Any of the above fractures may be simple or compound. The fracture may be compounded by a break in the continuity of the skin, or by a tear in the mucous membrane inside the nose, as evidenced by bleeding from the nose.

PATHOLOGY OF RECENT FRACTURES

H. P. Mosher (*Laryngoscope*, Jan., 1906) has called attention to the fact that in many fractures of the nose, when the blow comes from the left, as in boxing, the nasal bones are not driven directly backward. The de-

formity, in such cases, is apt to be a lateral one. For example, the left nasal bone is fractured in three places, at its attachment to the nasal process of the superior maxilla, in the median line from the opposite nasal bone and from the septum, and finally at its junction with the frontal bone. This nasal bone, to which the force of the blow is applied, is depressed. The opposite happens to the other, or right nasal bone, which springs outward, overriding the ascending process of the superior maxilla.

In recent fractures of the nose, the deformity is often due, in large part, to depression of the nasal process of the superior maxilla, as shown in Figures 3 and 5. Where the traumatism is received by the force being applied in an antero-posterior direction, such as occurs if a man's face strikes directly against the windshield of a car, the nasal bones are both driven directly backward, and have a tendency to become impacted between the nasal processes of the superior maxillæ.

DIAGNOSIS OF RECENT FRACTURES

The diagnosis of recent fracture of the nose is often difficult, particularly if the patient is not seen until several hours after the injury, when the soft parts may be enormously swollen and ecchymotic.

In many instances, however, as in some of the photographs shown herewith, it is perfectly obvious from inspection alone that we are dealing with a fractured nose. Gentle palpation often elicits bony crepitus and establishes the diagnosis. It is advisable to interrogate the patient carefully as to his appearance before the injury. Find out if the patient is certain his nose was formerly straight, and what deformity he thinks is now present. In a case, which recently came under my care at Bellevue Hospital, directly following an injury to the nose, I was reasonably certain, after taking the history, that a



Fig. 2.—Same patient, after reduction.

linear fracture with slight deformity was present. When the patient was anesthetized with gas-ether, the interne assisting me palpated the nose and remarked that he did not believe a fracture existed. However, when I pressed on the side of the nose with my thumb, using considerable force, the nose sprang back into good posi-

tion with an audible snap, thus confirming the diagnosis. To save time, in this case, a radiograph was not taken.

In my opinion, radiographs of the nose, as a practical matter, are of secondary importance to the clinical examination, which should always include inspection of



Fig. 3.—Recent depressed fracture of nose.

the septum with a nasal speculum. In most instances all the information we obtain from an x-ray plate is the presence or absence of fracture. Dr. F. M. Law, radiologist of the Manhattan Eye, Ear and Throat Hospital, endorses my own viewpoint that the x-ray usually tells us nothing about the alignment of the fragments, except in extreme deviation of the lower ends of the nasal bones.

Dr. Law, in a personal communication, tells me that x-rays for fracture should always be taken stereoscopically. Even then, the long suture between the nasal process of the superior maxilla and the nasal bone often looks like a linear fracture. A differential diagnosis, according to Dr. Law, can be made by taking a picture with a dental film held alongside the nose over the suture line. One should not forget, however, that x-ray plates of fracture cases often have considerable medicolegal value.

ANESTHESIA IN RECENT FRACTURES

On account of the trauma and contusion of the soft parts in recent fractures, it is advisable to use general anesthesia. Local anesthesia, i.e., infiltration with novocain, is not usually advisable, except when a number of days have elapsed since the injury, or where the fracture is slight in extent. Certainly a bad fracture of the nose, with considerable contusion of the soft parts and bad shattering of the bones, is best reduced under general anesthesia. In this connection, I wish to give a word of caution. Do not attempt to perform the reduction under gas alone but use gas-ether, for in many instances the patient will come out of the anesthetic before the reduction is completed.

BEST TIME TO OPERATE

In recent fractures of the nose, the best time to operate is immediately, before swelling of the soft parts

takes place. Often, however, we are not called till later, when it is best to wait for the swelling to subside, and the soft tissues to resume their normal contour. I have found that recent fractures may be reduced any time up to two weeks, but generally speaking, the earlier the better.

TECHNIQUE OF REDUCTION OF RECENT FRACTURES

My plan is as follows. Use a general anesthetic, take plenty of time, use as few instruments as possible, and do not employ any more force than is absolutely necessary. I find I can reduce the large majority of recent fractures with a small submucous periosteal elevator and my thumb. The elevator is used to raise the depressed fragments of bone, and the thumb is employed to exert pressure over the convex side of the fractured nose, to force the fragments back into the median line. Sometimes the flat handle of a nasal rasp, protected by a piece of gauze, is held over the displaced nasal bone, and a sharp blow with a mallet is administered. Usually, if the external deformity is corrected, the septum snaps back into position. If not, it may be necessary to use an Asch forceps to correct the septal deformity.

IMMOBILIZATION AFTER REDUCTION OF RECENT FRACTURES

It is difficult to lay down any rule as to immobilizing recent fractures after reduction. This is where experience counts. Sometimes the operator feels that the patient will do better without a splint. In still other instances, careful immobilizing is highly important. The following are the methods employed:

1. bandage rolls and adhesive plaster
2. moulded copper or aluminum splint
3. splint made of red dental moulding compound
4. Joseph's splint with head bands
5. Carter's bridge splint
6. Gillies' dental splint



Fig. 4.—Same, after reduction.

In any event, in bad fractures of the nose, the after-care of the patient is extremely important. Each case should be seen every day after operation during the

first week, and every second day after operation during the second week, to be certain that there is no displace-



Fig. 5.—Recent traumatic fracture of nose.



Fig. 6.—Same, after reduction.

ment of the fragments. After a fortnight, there is fairly firm fibrous union in most instances and no further trouble need be anticipated.

1. A gauze bandage roll on each side of the fractured nose, tightly held in position by straps of adhesive plaster attached to the side of the face, makes a very serviceable splint, and one which is always at hand. It is particularly useful, if tightly applied, with considerable pressure on the sides of the nose, when we wish to hold up the fragments after reduction of depressed fractures.

2. A moulded copper or aluminum splint, attached by strips of adhesive, is probably the best splint we have for plastic surgery of the nose. We employ ordinary cooper sheeting, such as is used by tinsmiths for roof-flashing, which may be bought in any hardware store or plumber's supply house. This is carefully moulded to fit the nose, the skin being protected by a layer of non-absorbent cotton.

3. A common type of splint used by plastic surgeons is made by heating red dental compound, which is moulded to the desired shape, and attached to the nose by strips of adhesive plaster in the same way that the moulded copper splint is applied.



Fig. 7.—Lateral bony deformity of nose.



Fig. 8.—Same patient after refracture.

4. Joseph, of Berlin, has perfected a splint attached to silk bands running around the head, across the vertex

and under the chin, where pressure upon the side of the nose may be applied by a long arm-like attachment regulated by a thumbscrew.

5. Carter's bridge splint is useful in depressed fractures. It consists of a bridge formed by two fenestrated metal wings connected together in the mid-line and regulated by a thumbscrew. The parts resting on the nose are covered by rubber tubing. To quote Carter (Recent Fractures of the Nose—*Medical Record*, Feb., 1922), "The second part of the instrument consists of two intranasal splints which are made at the time from gutta-percha, such as is used by dentists. Each of these

cavity up through the dorsum of the nose, just below the ends of the nasal bones, and the splints are pulled



Fig. 9.—Old fracture with lateral deformity, before correction.



Fig. 10.—Same case after operation.

splints is attached to a long silk suture on a curved needle. The needle is passed from within the nasal



Fig. 11.—Shows saddle nose deformity from old fracture.



Fig. 12.—Same case after rib-cartilage transplant.

into their position against the roof of the nasal cavities." The bridge splint is then placed in position over the nose, and the sutures tied over it. It is important to untie the sutures each day, remove the splint, bathe the skin with alcohol and re-apply. In my experience, it is not necessary for the patient to wear this splint for a longer period than six or seven days.

Instead of using a gutta-percha splint in each nostril, as suggested by Carter, I have obtained good results by attaching a small rubber button to the end of the suture material. This rubber button is made by cutting a piece of soft rubber tubing to the desired shape.

6. The English surgeon, Gillies, during the war, de-



Fig. 13.—Old depressed fracture (saddle nose).

vised a nasal splint which is fixed to the teeth. With such an apparatus, the amount of pressure applied to the nose may be regulated exactly. These dental splints are, however, expensive to make and are not necessary in the large majority of cases of recent fracture.

Fig. 1 shows a recent fracture of the nasal bones with a lacerated wound of the skin of the bridge of the nose, the result of an automobile accident. The skin wound was immediately sutured by the house surgeon and the wound allowed to heal before I was called, which was two weeks after the accident. I then reduced the fracture under local anesthesia, with the result shown in Fig. 2.

Fig. 3 shows a recent depressed fracture of the nasal bones and nasal processes of the superior maxillæ from a blow during a "hold-up". Fig. 4 shows the same patient after reduction.

Figs. 5 and 6 show the same type of fracture before and after reduction in still another recent traumatic case.

OLD FRACTURES OF THE NOSE

The correction of old fractures and deformities of the nose is such a broad subject that I shall confine my remarks to a brief description of the operative treatment of two common abnormalities, viz:

1. Lateral deformities.

2. Depressed fracture, or the so-called saddle nose.

For the correction of old fractures of the nose, I usually employ local anesthesia infiltration with 1 or 2% novocain. If there is obstructed nasal breathing due to a bad deviation of the septum, a submucous resection should be performed beforehand, or at the same time as the plastic operation.

When operating for lateral bony deformities, no external incision is necessary. The incision is made inside the vestibule. The periosteum and soft structures over the dorsum and sides of the nose are elevated, and the bones refractured with a saw or chisel. They are then moulded into the desired position and a copper

splint or bandage rolls applied. The splint should be changed at frequent intervals, and worn by the patient for three or four weeks to prevent thickening.

Depressed fracture (saddle nose) is also approached in much the same way. Local or general anesthesia may be used. The depression must be built up by some sort of supportive framework, the best of which is a rib-cartilage transplant taken from the patient's 7th, 8th or 9th rib on the right side. Kelly gouges, made in various sizes, are extremely useful in cutting the cartilaginous graft to the desired size and shape. After preparing the graft, a tunnel is made under the periosteum and soft parts along the depressed nasal bridge, and the cartilage is then inserted through one of the two types of columellar incision. Neither of these incisions leaves a noticeable scar. If one prefers, the cartilage may be inserted through an incision within the vestibule.

Where the saddle nose deformity is associated with a depressed or drooping nasal tip, this is best cured by a partial submucous resection of the nasal septum, and the insertion of a vertical piece of rib cartilage between the layers of the septal muco-perichondrium in order to raise and support the tip. This is in addition to the piece of cartilage already placed along the dorsum of the nose.

Fig. 7 illustrates a lateral bony deformity of the nose, the result of a fracture of several years duration. Taken before operation.

Fig. 8 same patient after refracture.

Fig. 9 old fracture with lateral deformity before correction.

Fig. 10 same case after operation.

Fig. 11 shows old depressed fracture (saddle nose).

Fig. 12 same patient after rib-cartilage transplant.

Fig. 13 old depressed fracture (saddle nose).

Fig. 14 same patient after cartilage transplant.



Fig. 14.—Same patient after rib-cartilage transplant.

Some of the postoperative photographs show traumatic reaction in the form of swelling of the soft parts. This is because most of the pictures have been taken about two weeks after operation. If we wait longer with these clinic patients, we often fail to get the photograph, due to the reluctance of the average ward case to return for further supervision as soon as he recovers from the immediate effects of the operation.

Complete Double Harelip Complicated by Protrusion of the Premaxillæ

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PREQUISITE to the more successful correction of complete double harelip is a body of surgical knowledge, great mechanical precision, and keen surgical judgment. Especially is this statement true when the protruding premaxillæ carry with them beyond the tip of the nose a segment of the upper lip, which seems to have become a part of the undeveloped column of the flattened nose.

Usually associated with this condition is a complete cleft of both the hard and soft palates. However, the palatine arch in these extreme cases, strange as it may seem, is usually better developed than in some of the less pronounced malformations. At this time only the lip is considered. It should always be operated upon first, for in the reconstruction of the upper jaw, the anterior third of the hard palate is included. Thus the operation for correction of the lip lays the foundation for that on the cleft palates, which comes later.

The time to operate is still much discussed. Any time from the second week after birth to the second year seems to be acceptable. However, since the advent of the long nipple, which can be chewed instead of sucked, the men who advocated early operation, because of the prospect of malnutrition, are losing ground. The author prefers to operate just after dentition, because then the misplaced premaxillæ can be arranged so that the teeth which they contain will have a normal contact with those of the lower jaw, and because, furthermore, the alveolar processes will be sufficiently developed to indicate a route for the wire suture or sutures, which under less favorable circumstances might injure the dental tissues. The only hindrance to operating at this time is the fact that occasionally the patient will catch the teeth with the tongue and loosen the normalized premaxillæ in their new location. If the teeth are large enough to encourage this unfortunate occurrence, they should be extracted as soon as a satisfactory dental contact has been established, but only after the wire suture or brace has been firmly placed.

Before the operation, the case should be thoroughly studied. Pictures of the patient should be taken from all angles. From these a plan or blue-print of the operation can be made. This procedure may be supplemented by an imprint upon plaster of paris or modeling wax. The plaster of paris gives a more accurate impression than the modeling wax, but is more difficult to handle. Before any impression can be taken at all, it is frequently necessary to give the patient a dose of paregoric. The author's routine includes both a blue-print and a cast, which furnish a correct scientific basis upon which to work. On the basis of such complete information, each step of the operation can be planned with mathematical and mechanical accuracy, which greatly contributes to the expeditiousness of the operation, as well as to the degree of success. The patient should be examined for acidosis and for enlargement of the thy-

mus gland. If necessary, the x-ray should be resorted to in excluding the possibility of an endocrine condition.

In the preparation of the patient, it is well nigh impossible to sterilize the field of operation; but this knowledge should stimulate the operator and his assistants to greater effort rather than create in them an acquiescent lack of thoroughness. The face of the patient should be well cleansed, especially the lips, the nose, and the mouth. Soap and water, boric acid solution, and saline solutions have been recommended as cleansing agents. For the final antisepticizing process, alcohol and mercuriochrome are highly satisfactory.

In the operating room, a panorama of apparatus and a corps of assistants are unnecessary; however, the operator should have the benefit of good exposure, adequate light, proper instruments, and a reliable anesthetist. These facilities add to the comfort of the surgeon, who is under unwanted strain while doing this type of surgery.

Ether is undoubtedly the best anesthetic in extensive deformities of the type under discussion. The anesthetist should be selected with care, for his efficiency is almost as conducive to good results as the ability of the operator. Complete and satisfactory exposure of the field of operation is largely in the hands of the anesthetist. Nothing is so disconcerting and irritating to the operator as a half anesthetized child constantly moving and changing the field of operation.

The paramount aim of the operation is to secure as nearly perfect a lip as possible, with respect to both function and contour. The establishment of the correct contour and shape of the lip is as important as the institution of normal function. In female children, the contour and shape of the lip cannot be too greatly stressed, for the results may determine the ease and happiness with which the patient goes through life. Fortunately, a good cosmetic result usually insures good function.

In these extreme cases, before reconstruction of the lip can be considered, the mechanical nature of this feature must be studied as well as that of its neighboring anatomical structures. Since the alveolar processes of the jaw act as a foundation for the lip, any disarrangement of the continuity of the foundation must be overcome before the labial tissues can be drawn into place. Even the nasal orifices have precedence over the lip in the reconstruction, for it is within and around these apertures that the points from which the lip is suspended are located. Considered in the order of performance the operation may be divided into three steps:

1. Remodeling the upper jaw.
2. Restoring the nasal orifices.
3. Reconstructing the lip.

In performing the initial step—remodeling the upper jaw—the operator must first compare the blue-print and plaster cast, and from these determine how much tissue



1. Complete double harelip showing the premaxilla extending beyond the tip of the nose. 2. Full face view of same case. 3. One month after operation.
4. Six years after operation. (Child camera-shy.)

must be removed from each of the four superior maxillary tips, which are denuded when the premaxillæ are returned to their normal location. In like manner, the distance backward that the premaxillæ must be removed can be found; and the amount of the vomer that must be removed to facilitate this procedure can be calculated.

After the necessary calculations, an incision about three-quarters of an inch in length is made, just posterior to the premaxilla, along the border of and parallel to the vomer. The incision extends down to and through the periosteum, which is pushed aside. Through the opening in the periosteum the predetermined amount of bone is removed, usually in a V-shaped section. The premaxilla are then found to be freely movable. The four free maxillary tips are denuded (the periosteum with some of the bone included), and the premaxilla are snugly fitted into their normal position. About a half inch outside of the denuded tips of the lateral maxillary segments and between the dental tissues, openings are made through the bone. From inside the mouth, a No. 19 silver wire is passed through one opening in the maxilla, along its periosteum, across the premaxilla just in front of the periosteum, but beneath the segment of lip, on to and through the other opening in the opposite section of the maxilla, and into the mouth. The ends of the wire suture are twisted, and the premaxilla rest firmly upon their parent segments and against the fractured vomer. If the operator's mechanical measurements are accurate, this one wire suture is all that is necessary; if they are incorrect, several wire sutures are necessary, as well as suturing of the soft tissues.

After the continuity of the upper jaw is secured, restoration of the nasal orifices is begun. The lateral segments of the lips are dissected loose well upon the cheeks, and the lower half of each of the inferior lateral cartilages is detached. The technique of performing this part of the operation is extremely important, because it is at this point that it is necessary to sever several branches of the facial artery, and extensive bleeding may occur. This can be prevented by pulling the tissues taut and clamping them with a hemostat as closely to the bone as possible. Small scissors should be used to cut along the center of the track left by the removed hemostat. This process may be repeated until sufficient liberation of the tissues has been secured. In this man-

ner, the bleeding is almost entirely eliminated. Then the edges near the nasal orifices of both the lateral and central segments of the lip are freshened. Each of the segments is incised for about a centimeter on either side of and perpendicular to the clefts. Sutures are inserted at the ends of the incisions. When the sutures are tied, the small, superior sections of the segments are pushed up into the nose to form the intranasal, labial portion of the nasal orifices. Small sutures are used to hold the elevated sections in place. Thus, the orifices of the nose are restored.

Since the foundation has been completed and the points of suspension have been secured, it remains only for the operator to draw the labial curtain across in order to finish his task. The remaining portions of the segments of the lip are freshened, but the vermillion border on the lateral segments is saved as the incisions used to liberate it pass laterally near the center of the segments for about one and a half centimeters. These incisions cross large branches of the labial artery and bleeding is extensive unless immediately controlled. The sections loosened by the incisions are pulled downward to take their proper places in the completion of the vermillion border of the lip. Large, dermal sutures are used, intra-orally, for the muscle and mucosa, while horsehair and small dermal sutures are very satisfactory for the skin. After the edges of the incisions have been approximated (care being taken that the edges of the skin and the edges of the mucosa are even and not overlapping each other), the surgeon puts the artistic touch to his scientific accomplishment. The cupid's bow effect, characteristic of the face with finely chiseled features, is the distinguishing difference between good and mediocre or unfinished results. This effect is always sought after by the persistent, serious-thinking cheiloplastist, and the intricacy of its acquisition is interesting. A scalpel is passed through the lip at the superior edge of the vermillion border, perpendicular to the line of sutures and at such an angle that the point of exit is about a centimeter above the point of entrance. The incision should be about four-fifths of a centimeter in length, and it should be made with as little injury to the sutures as possible. Traction is made upon the loosened section of the border of the lip, and the perpendicular incision is sutured, both intra- and extra-orally, so that when finished it runs parallel to the suture line. The

wound is painted with two-per-cent mercurochrome solution.

An apparatus for preventing traction upon the line of incision is strapped on with adhesive plaster. A U-shaped piece of heavy wire, with the bottom of the U turned up, so that it fits across the nose and leaves the



Before and after operation in unilateral deformity; in which the cupid's bow effect after seven years is plainly visible. Nose will be corrected at 12 years of age.

wound completely exposed, is satisfactory. Complete exposure permits cleanliness, frequent inspection, and proper application of mercurochrome, or whatever anti-septic the surgeon chooses to use. Cuffs or splints of tongue depressors are strapped around the arms to keep the patient from putting the hands in the mouth. These cuffs should be removed frequently and the arms massaged. The position of the child in bed should be changed often after the operation. This precaution tends to prevent pneumonia. To prevent acidosis, only water containing sodium bicarbonate should be given for several days. It is best to feed the patient liquids with a medicine dropper, which is allowed to enter only the corner of the mouth. If the patient is given the opportunity of biting down upon some hard substance, the premaxillæ may be dislodged or loosened. If the patient is from a rural district where children are given hard food while quite young, care should be taken to see that all food is thoroughly ground and softened before it is given to him. The diet should be as nearly normal as conditions will permit. The sutures in the skin are removed between the eighth and tenth days; those inside the mouth should be removed between the tenth and twelfth days. The wire appliance for the prevention of traction should be worn until the fifteenth day. The wire suture or brace is removed at the end of six weeks, at which time the scar on the lip may be peeled. Three weeks later massage is begun.

The undeveloped columna nasi can be lengthened by massage and traction upon the tip of the nose. This procedure, if practiced over a long period of time, greatly facilitates surgical correction of the condition when the child is about twelve years old.

Strange as it may seem, the mortality rate in the correction of the harelip is greater than in the operation upon the cleft palate. Fatalities most frequently result from status lymphaticus, hemorrhage, acidosis, or pneumonia.

In operations as intricate as the one just described, it is as important to know what not to do as to know what

to do. Hence, to emphasize further the correct operative steps previously mentioned, the following frequently occurring missteps may be listed:

1. Complete removal of the premaxillæ, which directly produces an unnecessarily large opening in the anterior portion of the hard palate, a narrow, flat upper lip, and indirectly, a large, thick lower lip. This bad result is due to a lack of mechanical knowledge on the part of the operator and can only be corrected by grafting a section from the lower into the upper lip.

2. Misplacement of the premaxillæ, which may terminate in incomplete dental contact.

3. Failure to make the small incisions which complete the contour of the nasal orifices.

4. Imperfection of the vermillion border, which usually results from incising the labial segments too near the juncture of the skin and mucosa.

With the advent of the blue-print and the plaster of paris cast into this department of surgery, it is possible for the surgeon to reproduce an exact duplicate of the deformity in wax or plaster of paris. Upon the result—mold or model—the proposed operation may be performed with almost the same accuracy and completeness as upon a cadaver possessing the same malformation. This new development is tending to make plastic surgery of the lip more intricate, but more easily and more thoroughly understood. Through this preoperative routine, the results, as compared with those produced without forethought or calculation, are steadily improving. A good result, according to the old conception, was one in which the wound healed and the patient looked human. A splendid outcome, according to the modern conception, is one in which the function is normal, the contour and shape better than normal, and the scarring imperceptible to the casual passer-by.

Necessity for Revising Common Conception of Focal Infection

MYER SOLIS COHEN, Philadelphia (*Journal A. M. A.*, April 7, 1934), points out that the common conception of focal infection concentrates attention on the infected tissue rather than on the infecting bacteria. When the physician speaks of eradicating a focus of infection what he really means is removing infected tissue, such as tonsils or teeth, or draining and cleaning out an infected cavity, such as a nasal accessory sinus. Infecting bacteria seldom are confined to a circumscribed area of diseased tissue but are present also on adjacent tissues, which may be apparently free from disease. Enucleation of diseased tonsils does not necessarily remove the focus of infection, because the infecting organisms may still remain in tonsillar stumps, in recurring tonsillar tissue, in infratonsillar lymphoid tissue and on the apparently normal mucous membrane of the tonsillar fossæ and the nasopharynx. A focus of infection in a nasal accessory sinus is not necessarily eliminated by treatment or operation, because infecting bacteria may still persist there. Such expressions as "removal" or "elimination" or "eradication" of the focus of infection should be avoided when one is describing tonsillectomy or sinus treatment or operation. The conception of focal infection should stress the bacterial element and regard the causal germ as the chief infecting agent. Surgery alone cannot possibly remove all the infecting organisms, which can be overcome only by the patient's defensive forces. The elimination of a focus of infection requires the production of bactericidins and other antibodies to destroy the infecting bacteria and render their toxins harmless, which can be aided by hygienic measures but in many cases needs the artificial stimulation of a potent vaccine containing the proper antigens obtained from the infecting bacteria. The pathogen-selective culture selects the etiologically important organism from a mixed culture, and the vaccine made from it contains both the endotoxins and the soluble exotoxins of the infecting bacteria. When, in addition to the extirpation of accessible and removable diseased tissue that has become a favorable soil for the propagation of the infecting germs, the required specific antibodies have been produced in sufficient quantities to overcome the infecting organisms and their toxins, the focus of infection can truly be said to be eradicated at both the primary and the secondary foci.

Heart Disease and Anesthesia

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THE problem confronting most surgeons before subjecting a patient to any operative procedure (especially when through routine examination the patient is found to have a murmur or some indication of heart disease) is—will this patient's heart stand the stress and strain of operation and anesthesia? Accurate knowledge as to the patient's general fitness in this respect is of paramount importance. A cardiovascular fatal termination in surgery may suggest that the gravity or the seriousness of the condition of the cardiovascular system was possibly neglected or unrecognized.

The question arises as to whether or not anesthetics and operative procedures have any damaging effect upon the heart. The basis for this is the works of H. M. Marvin and Pastor and of Lennox, Graves, S. A. Levine and others. Electrocardiograms taken during operations demonstrated premature beats, paroxysmal tachycardia and disturbances of the pacemaker even in normal hearts not detected preoperatively. These abnormalities were not associated with demonstrable changes in the circulation. The blood pressure varied considerably, being constantly above or below the pre-operative level in about equal numbers of cases. The extreme lowering of systolic and pulse pressure was found to be of clinical significance in early cases of shock, the true nature of which is still imperfectly understood, although a special research committee following the World War and later Cannon and others concluded that injurious autolytic products, at the site of trauma, being absorbed into the circulation caused increased permeability and dilatation similar to the action of histamine.

The action of anesthetics may be primary but as a rule it is secondary. Briefly summarizing the effect of the common anesthetics, nitrous oxide causes a marked rise in blood pressure; ethyl chloride slight or none; ether causes first a rise, then with deep narcosis a fall; chloroform a fall in blood pressure, the fall being due to either direct vascular dilatation or to dilatation of nervous origin. Ether has a direct stimulating effect on the heart and chloroform a depressant effect. Ethylene manifests little or no effect on blood pressure. Spinal anesthesia generally causes a lowering, probably through nervous dilatation. Chloroform causes death in animals by ventricular fibrillation; probably the same occurs in the patient.

Where one anesthetic involves a long period of induction with proportionately greater cyanosis, strug-gling, rise of heart rate and blood pressure and production of mucus in the throat and bronchi, while another largely avoids these, why not use the latter where the choice can be made? Ethylene is very commonly the chosen anesthetic in cardiacs.

Surgical deaths are too often explained on the basis of heart weakness and failure when the real cause may be surgical shock, hemorrhage, sepsis, cerebral accidents, etc. The number of fatalities directly attributable

to heart disease would be rather insignificant with the proper grouping of these cases. It is in the group of arteriosclerotic heart disease or degenerative heart disease with or without hypertension that the greatest mortality occurs. From a number of hospital statistics it has been shown that about two-thirds of the deaths occur in cases over fifty years of age. It is in this group that cerebral hemorrhage is more often the cause of termination than is recorded. In the consideration of death from heart disease, demonstrable heart failure takes on two main forms:

- 1—*Congestive*—with dyspnea, orthopnea, cyanosis, hepatic and pulmonary engorgement, and edema.
- 2—*Anginal*—with substernal oppression or other manifestations of angina pectoris, or with the allied conditions of pulmonary edema or cardiac asthma.

In general, a pronounced fall in blood pressure, with pallor, cold sweat, and tachycardia (in the absence of coronary occlusion), is likely to be a vasomotor disturbance or evidence of shock or hemorrhage.

It is a fact that known heart disease increases the operative risk; but with the proper anesthesia and anesthetist and limited surgery this added risk is practically nil.

Heart disease in itself is no contraindication to necessary surgery. As for elective surgery, patients with heart disease, irrespective of murmurs, size, etc., leading a normal active life, will generally stand operative procedures comfortably. Exceptions may be patients with syphilitic heart disease accompanied by aortic insufficiency; complete heart block as a manifestation of any heart disease; and angina pectoris or coronary disease—which are apt to lead to sudden death. The latter two groups generally cannot lead a normal life without symptoms; the syphilitic may.

Dr. Ochsner has well said: "I think it would be unfortunate should surgeons receive the impression that patients suffering from heart disease are especially safe. I believe they are safe because they are considered especially unsafe."

How can the risk entailed by patients with heart disease be minimized? Better cooperation between the surgeon and internist in cases of known heart disease and in cases where the history of subjective or objective symptoms suggests any cardiovascular impairment is a very important factor. In place of the customary surgical history, a very careful detailed history relative to the patient's life or activity preceding the surgical condition will at times prevent unhappy results. In appraising the cardiovascular system take into account the question as to whether the patient on walking, running, climbing stairs or when under emotional strains manifests symptoms of cardiovascular importance. A patient with retrosternal pain on exertion, as in walking against the wind, should have an electrocardiogram, for about 70% of these patients will show abnormalities even though the heart may appear normal

(Concluded on page 184)

Surgical Aids in the Treatment of Blood Dyscrasias

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SURGICAL treatment has been attempted in the past for most forms of anemia, for the chronic forms of leukemia, and for purpura. A more thorough comprehension of the mechanism of blood formation and destruction has gradually reduced the indications for surgical intervention, particularly splenectomy, and it is probable that further progress in this field will result in still less frequent resort to this operation.

Considering first the factors which affect the O₂ carrying function and the red blood cells, we recognize only three fundamental causes of anemia:

1. Hemorrhage.
2. Increased destruction of R.B.C.
3. Deficient production of R.B.C.

Blood transfusion in acute hemorrhage has become an established procedure. The only difference of opinion exists in cases where the bleeding point cannot be immediately controlled, as in peptic ulcer. Our practice in such cases is to delay transfusion until there is evidence that active bleeding has stopped and then to proceed slowly with repeated small transfusions (not over 500 c.c.).

In anemia from chronic blood loss surgical treatment is almost always required, when the bleeding point is found. Hemorrhoids, uterine fibromyomata, and ulceration in the nasopharynx are among the common causes, but many different conditions may be responsible and no two cases will be the same.

In the second group of cases, where R.B.C. are being destroyed within the body, we find the classical indication for splenectomy. Three diseases occur in which this takes place which respond to operative removal of the spleen:

1. Hemolytic jaundice occurs in two forms, one apparently due to hereditary transmission since it occurs in families, and another acquired form.

The most important facts to be borne in mind in this connection are that the constant increased rate of blood destruction imposes a severe strain on the bone marrow-stimulating mechanism, and that such cases if allowed to go untreated for too long a time will result in aplasia of the bone marrow. Splenectomy should be done as soon as the diagnosis is established, even if the symptoms are few, to conserve bone marrow function.

2. The sickle-cell anemia of Negroes is a disease very similar to familial hemolytic jaundice, except that the R.B.C. show a characteristic deformity, and instead of being fragile show an increased resistance to hemolysis. Splenectomy when done in time is also the treatment of choice in this disease.

Within the last few years an acute form of hemolytic jaundice closely resembling an acute infection has been

described by several writers, notably Dr. Lederer of the Brooklyn Jewish Hospital. It is characterized by fever, symptoms of infection, jaundice, and blood findings similar to the more chronic cases. All of his cases have responded to transfusion.

3. In splenic anemia (Banti's Disease) the results of splenectomy, while not so striking as in the two preceding conditions, are still good enough to warrant its use, especially if we can make the diagnosis before the liver shows advanced cirrhosis. There is no other treatment and splenectomy offers the best chance for an arrest of the disease.

Deficient production of R.B.C. may be caused by lack of blood-forming tissue, by lack of raw materials, such as iron, copper, etc., and their proper absorption by the gastrointestinal tract, and finally by lack of stimulus to red cell maturation. In none of these conditions can we help by surgical measures. However, there are a large number of cases, in the group in which the anemia is due to lack of raw material, that would be greatly benefited by proper medical care, but who come to the surgeon because of lesions in the appendix, gallbladder, duodenum or stomach, and are classified by him as secondary anemia; generally their blood deficiency receives but scant attention.

We come now to the diseases which affect the function of blood coagulation and the platelets. Among these thrombocytopenic purpura, especially the chronic form, is still considered by many to be an indication for splenectomy. Certainly many cases were apparently cured by this measure. Recent investigation by some, however, tends to place it in the field of an endocrine disturbance, and by others into the food deficiency field. Until further evidence accumulates there will still be a place for splenectomy in this disease.

Diseases which affect the phagocytic function of the blood and the W.B.C. are no longer treated by splenectomy. The wide diffusion of the reticulo-endothelial system throughout the body, and the fact that in the various forms of leukemia the whole system is involved, not merely one part of it, the spleen, and the greater efficiency of x-ray and therapy in reaching all of these parts, have led to the abandonment of the operation in these cases.
36-40 Bowne Street.

Physiologists claim that heart attacks after heavy meals are due to extra exertion of the heart rather than diversion of part of the blood supply to the brain.

Scientists of the University of Wisconsin believe that there is an antiparalytic vitamin, B₄.

Report of a Case of Mastoiditis Presenting Some Interesting Complications

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EXTRACTION of infection from the middle ear and the mastoid process to the facial nerve, the lateral sinus, the meninges or brain, is always formidable. Although a certain percentage of these patients will recover, the majority will succumb if left to their own defensive mechanisms.

Facial paralysis is easily diagnosed and is nearly always speedily relieved if a careful operation is promptly performed. Meningitis complicating aural suppuration presents the same clinical syndrome as other types of meningitis and it is nearly 100 per cent fatal. A few recoveries have been reported. Dr. Charles Martin reported one from our service in November, 1932. Lateral sinus thrombosis and brain abscess, however, may occur without any characteristic symptoms or signs and may remain unrecognized for an indefinite and fatal period. This is especially true when associated with the so-called painless type of mastoid disease. Furthermore, cases of sinus thrombosis may be complicated by cavernous sinus thrombosis, metastatic abscesses in the musculature, brain, kidneys, etc., metastatic pneumonia, pleural cavity infection and orthopedic conditions.

Statistics vary as to the frequency of these complications of mastoiditis, but reliable reports show an incidence of 9.7 per cent to 18.1 per cent for all complications. In a series of 800 cases of mastoiditis reported by Munby and Jowett¹ the incidence of complications was 147, or 18.1 per cent. Brain abscess occurred in 8.9 per cent; lateral sinus thrombosis in 5 per cent; purulent meningitis in 2.5 per cent. Dr. Swift² reports 126 cases of mastoiditis among which there were 12 complications, or 9.7 per cent. These were divided as follows: lateral sinus thrombosis, 10 per cent, and the others less than 1 per cent each. Dr. Wanamaker³ records 487 cases of mastoiditis and of these there were 26 cases of lateral sinus thrombosis, or 5.75 per cent. Twenty cases occurred in acute ears, six in chronic ears.

It is generally admitted, however, that the operative results in cases of lateral sinus thrombosis are exceedingly good, especially if the diagnosis can be made early; that they are proportionately bad when the diagnosis is made at a later time.

The recognition of this latter condition is not, as a rule, difficult when we have such a classical picture as: suppurative otitis media, acute or chronic mastoid involvement, a widely fluctuating temperature curve, and chills. Nevertheless, there are cases in which there are no chills, the temperature does not fluctuate, and other symptoms and signs obscure the picture. Then, it is well to bear in mind this fact, that not only may a suppurating mastoid be complicated by a lateral sinus thrombosis, but that this lesion may occur even after a mastoidectomy has been done for some time, provided there is suppuration within the middle ear.

It is such a case complicated by a complete facial paralysis, a bacteremia, a metastatic pneumonia, a serofibrinous pleurisy and toxic arthritis which we wish to report.

T. R., a boy, aged 9, was first seen by one of us on the morning of October 3, 1932. At that time his mother stated that he had had a discharge from his left ear following bathing during the latter part of June, 3½ months previous. The rupture was spontaneous; there was no pain. The ear had discharged profusely all this time; and had been cared for by the family doctor, who had advised daily irrigations.

Examination in the office showed a well developed, somewhat nervous but healthy appearing boy. The left external aural canal was filled with a thick, tenacious, mucopurulent discharge, which came through an anterior perforation of the drum head. There were granulations about the perforation. There was no sag of the posterior canal wall. The mastoid process was normal.

A roentgenogram bore out our diagnosis of surgical mastoiditis and the child was admitted to the hospital that noon.

At operation that afternoon the granulations were removed from the drum and a posterior myringotomy was done. When the periosteum covering the mastoid process was retracted, a bluish area, 1 cm. in diameter, was noted over the tip. This was easily broken through with a mastoid curette and found to open into a large tip cell. All of the cells were found to be filled with a thick mucopurulent discharge. There was partial destruction of the intercellular septa. The sigmoid sinus was pathologically exposed just before it enters the bulb. The sinus pulsated and the wall appeared normal in all respects. The incision was closed except at the lower angle, which we kept open for drainage. Culture of the discharge from the mastoid cavity gave "No growth."

His stay in the hospital was uneventful. His temperature rose to 101.4 following operation but became normal on the second day and remained so. The sutures were removed on the sixth day and the patient was discharged on the tenth day.

There was nothing unusual about his follow-up care. The incision closed completely in about eighteen days and the middle ear became dry; yet the original perforation in the tympanic membrane never healed. The child was seen occasionally

Late in February, 1933, the boy contracted a severe rhinitis and on Sunday, February 26th, he was brought into the office. Examination showed a profuse, heavy, mucopurulent discharge from both nares and posteriorly into the pharynx. The nasal sinuses were clinically negative. The right ear was normal. There was a serous discharge from the old perforation in the left ear. The next day it was profuse and on Tuesday he had a marked fever with still more discharge and redness and tenderness of his mastoid scar. The scar was incised and drained the next morning. Dressings were done daily and the nasal condition treated, yet the fever remained, the nasal and aural discharge continued and his condition became progressively worse. On March

6th he complained of pain and tenderness over the left nasal antrum. Lavage showed only serum and a roentgenogram taken the next day showed the nasal sinuses to be clear.

He was readmitted to the hospital on March 7th with a temperature of 105 degrees, pulse 120, respirations 38. Physical examination showed a very ill boy, face flushed, a sluggish reaction of the left face, profuse discharge from the nose, left external aural canal and from the incised left mastoid scar. The chest was negative. A blood culture was taken. A blood count showed erythrocytes 4,470,000, hemoglobin 84 per cent, color index 0.8+, white blood cells 19,400. A differential count showed polymorphonuclears 88 per cent, small lymphocytes 11 per cent, large lymphocytes 1 per cent. The urine was negative.

March 8th: the facial paralysis was complete on the left side; the temperature dropped to 99.6 degrees and then rose to 105 degrees. The respirations varied between 25 and 45. There were abnormal breath sounds in the right base posteriorly. A roentgenogram of his chest was ordered. The blood culture was negative. The x-ray report read: "The differential diagnosis rests between a confluent bronchopneumonia and an inflammatory process in the lymph nodes."

From March 8th to 11th the temperature varied between 106 and 101 degrees. There were no chills; the patient did not complain of even feeling cold. There was no cervical rigidity or adenitis. The course of the left internal jugular was not tender. A roentgenogram of the chest on March 10th showed "slight increase in the extent of the infiltrations in the right lower lobe. The findings are those of a confluent bronchopneumonia." On March 11th the chest condition and facial paralysis remained the same; a second blood culture was taken.

On March 12th this culture was reported positive for *Streptococcus hemolyticus* and a probable diagnosis of lateral sinus infection was made. It was deemed advisable to ablate the sinus, and relieve the infection of the facial nerve. Hence an internal jugular ligation, radical mastoidectomy and an ablation of the sinus were done.

When the sinus was exposed its wall was thick, lusterless, and a dusky blue. The sinus wall was incised in its midportion but there was no bleeding; instead, purulent clots were presented. As much of these as it seemed advisable were removed and a gauze drain was placed in the cavity.

Following this operation Dr. Vurgason gave the patient 350 cc. of blood by the Scannell Method. This was repeated two days later.

During the following 8 days there was very little change. The child became weakened and lost considerable weight. A blood culture taken on the 16th was negative. The wound was healing well by primary union. On March 20th the temperature abated somewhat, fluctuating between 100.5 degrees and 104 degrees until March 23rd, when the temperature suddenly rose to 105.8 degrees and many petechial spots appeared, principally on the chest, abdomen and back. A blood culture was taken. The blood picture showed 4,480,000 red blood cells, hemoglobin 84%, 23,100 white blood cells, 90% polymorphonuclears, 4% small lymphocytes and 6% large lymphocytes. Examination of the chest revealed signs of pleurisy with effusion on the right side. An x-ray film of the chest taken March

24th was reported as follows: "Reexamination of the chest shows extensive pleural effusion on the right side, involving the entire chest with the exception of a small area between the 3rd and 6th ribs posteriorly. The heart and mediastinum are slightly displaced to the left. The left lung is clear."

Dr. Vurgason did a thoracentesis and obtained a clear straw colored fluid. Culture of this fluid was sterile.

The blood culture was also reported as positive for hemolytic streptococcus and Dr. Vurgason gave a third transfusion. There was no reaction to the transfusion. The temperature remained septic. A fourth transfusion was given two days later.

Following this the temperature abated somewhat but still remained septic. The child's appetite improved; he became less irritable. His operative wounds were well healed and there was only a moderate discharge from the external aural canal. A second thoracentesis was done on March 27th but only a few cubic centimeters of serous fluid were obtained.

On the 29th a blood culture was sterile.

His general condition improved, but the chest signs were still suggestive of a serous pleurisy. A roentgenogram taken on April 6th was interpreted as follows: "Pleurisy on the right side as previously reported. There still appears to be a small amount of fluid present. There are some irregular infiltrations in the lung due to an unresolved pneumonia or possibly a beginning lung abscess."

Thoracentesis done the next day and on April 13th failed to discover any more fluid.

About this time he began to complain of stiffness, tenderness and pain in the left knee and ankle. Examination was always negative except for the tenderness. The condition was undoubtedly a toxic arthritis.

On the 14th of April the fifth transfusion was given and a blood culture taken. This culture was sterile. Yet the boy's temperature curve was septic in nature, varying between 103 degrees and 99 degrees. He was still irritable, appetite fair, musculature and joints stiff and tender.

The sixth and last transfusion was given four days later. Following this the temperature curve lost its septic character and began to "flatten out." His disposition became rapidly better, the appetite improved, he gained weight and began to draw himself up in bed—to take an interest in life.

He was discharged on May 8th, just nine weeks after his admission. The facial paralysis was still complete, but during the tenth week it began to recover and was completely so in ten days. Later he was readmitted for three days while a skin graft was placed in the auro-mastoid cavity. Today he has a dry ear and is a robust boy.

Note: Four days after this paper was presented Dr. Vurgason was called to see the boy at his home. The doctor found that the child had been suffering with acute abdominal pain for four days; he made a tentative diagnosis of ruptured appendix and had the child admitted to the hospital. Dr. Vurgason operated immediately and a ruptured appendix with a generalized peritonitis was found. The child died seven days later.

COMMENT

In reviewing this case certain points are worthy of note:

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Cancer

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Assisted by CHARLES WILLIAM HENNINGTON, B.S. (Rochester), M.D. (Hopkins), F.A.C.S., German Literature Editor, and UMBERT CIMILDORO, A.B. (Cornell), M.D. (Rome), Italian Literature Editor.

Cancer of the Bladder

(Concluded from the May issue)

TREATMENT: No method of treatment is suitable for all cases of carcinoma of the bladder (Smith and Mintz, 4). For this the growth must be discovered early and completely and promptly destroyed.

The Germans, Stutzin (10) and Joseph (11) are frankly skeptical concerning any form of treatment except palliative measures. Stutzin says that it is not necessary or advisable to undertake treatment in every case of bladder cancer. In some we are driven to undertake treatment on account of hemorrhage, pain, and tenesmus. In such cases the actual cautery followed by electrocoagulation is valuable. And Joseph says that electrocoagulation in carcinoma of the bladder is futile, except in certain isolated favorable cases. Treatment is not advisable until the complications appear, and then palliative measures are to be used. On the other hand, American writers, particularly Coffey (20) are more optimistic. Coffey reports eleven cases with three surgical deaths, or 27.27 per cent. Seven of his cases were symptomatically cured following cystectomy, with no evidence of recurrence, $\frac{4}{5}$, $\frac{3}{5}$, $\frac{2}{5}$, $\frac{2}{5}$, $\frac{1}{2}$, $\frac{1}{2}$ and 1 year, respectively. It is a pity that Coffey's untimely death will probably result in failure to follow these cases into the future. He says that cystectomy for cancer of the bladder is probably one of the most successful operations that has been introduced into the domain of surgery for the treatment of cancer. Transplantation of the ureters into the large intestine by the submucous implantation method is an essential part of the operation. Coffey's paper gives the technical details of the operation.

Among the surgical procedures advocated by various writers for the treatment of cancer of the bladder are: (1) Thermal cauterization and electrocoagulation advocated by Stutzin (10). (2) Electrocoagulation advocated by Goldecke (18), Smith and Mintz (4), and Smith (13); (3) Coagulation with trichloracetic acid, advocated by Joseph (11); (4) Surgical diathermy, advocated by Kretschmer (3); (5) High frequency resection, or fulguration, advocated by Mathews (17) and Fullerton (9); (6) *Etincelage* with open bladder, advocated by Boeckel (12); (7) Resection, advocated by Smith and Mintz (4), by Smith (13), Wade (16) and Coffey (20) (cystectomy) and Begg (22). It is but fair to say that the majority of these authors do not confine their surgical measures to a single form; but vary the method according to that best suited to the individual patient according to their judgment. Stutzin's paper is the report of a single case, as is Wade's. The patient reported by Wade had been operated upon only six months before the paper was written. Boeckel's is based on fourteen cases, and there is a description of his method. Joseph says that surgery in cases of carcinoma of the bladder is futile, except in certain isolated favorable cases. He considers thermocoagulation too weak but chemocoagulation with trichloracetic acid the best. He describes his method in great detail. Kretschmer used surgical diathermy exclusively in his 109 cases. Twenty-three of his patients were living and well with normal urine from fourteen and a half years to one year after treatment. The average at the time of writing his paper was 4.65 years. Twelve patients had recurrences and twenty-six died of carcinomatosis. Smith (13) treated eleven of his fifty cases by excision. There were three postoperative deaths (27 per cent), two cases of recurrence (18 per cent), and three cases cured for two years, (27 per cent). Fifteen were treated with electrocoagulation. There was one postoperative death (7 per cent), four cases of recurrence (27 per cent) and four cases cured at the end of two years (27 per cent). Wade is an advocate of the method described by Coffey. Mathews advocated resection with the use of

high frequency or cautery. Multiple tumors he believes should be treated with open operation and high frequency or cautery.

IRRADIATION: The case for irradiation is comprehensively set forth by Barringer (14). His observations are based on 127 cases; forty-five cases of papillary carcinoma and eighty-two cases of infiltrating carcinoma. He considers radium superior to operative removal. Of the forty-five cases of papillary carcinoma, twenty-five or 55.5 per cent were "controlled" more than three years. Of the eighty-two cases of infiltrating carcinoma twenty-three, or 27.5 per cent were "controlled" more than three years. The suprapubic implantation of radium has an operative mortality of between 3.0 and 4.0 per cent; surgical removal has an operative mortality of between 10.0 and 20.0 per cent. Of the fifty cases reported by Smith (13) twenty-four were treated with radium. There were seven postoperative deaths (29 per cent), six recurrences (25 per cent), and seven two-year cures (29 per cent).

Kidd (15) reported thirty-two cases treated with radon. Diathermy was used to prepare the tumor for the seeds. He thinks that the chances are about even for cure or for a dangerously irritating action of the radon. Grosman (19) thinks that irradiation is an improvement on surgery alone. The two should be used to reinforce each other.

Dean (21) reports a case of grade III carcinoma of the bladder treated with cautery and 1069.2 millicurie hours of radon. The patient was living and well seven and one-half years later. He also reports a case of grade III papillary squamous carcinoma treated with cold snare and 884 millicurie hours of radon. The patient was living without recurrence twelve years and four months later.

Stutzin (10) says that irradiation in the treatment of carcinoma of the bladder has led to disappointment; scarcely any cures have been observed. Joseph (11) considers Röntgen irradiation bad on account of the likelihood of producing edema around the opening of the ureters with consequent uremia. He also considers radium irradiation bad.

The paper by Smith and Mintz (4) compares the different methods of treatment in a manner that lends itself to tabulation.

Method of Treatment	Number of Cases
Inoperable or simple cystectomy	33
Excision of the growth	7
Excision of the growth and resection of the bladder wall	19
Total cystectomy	5
Tumor destroyed by electrocoagulation	34
Tumor destroyed by simple cauterization	3
Irradiation with radium	49
	150

Of these cases there were eleven five year cures or 7.33 per cent.

They say that one important cause of the poor results in the surgery of carcinoma of the bladder is the long period of delay between the occurrence of the first symptom and the patient's visit to the physician for advice. A comparison of the results of resection, electrocoagulation and radium implantation shows that the lowest number of postoperative deaths, that is, deaths in the hospital, occurred in cases treated with electrocoagulation (26 per cent). The next in frequency occurred in those treated with resection (32 per cent). The highest number of post-operative deaths occurred in those treated with radium implantation (40 per cent). The end results from these methods are approximately the same.

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Economics

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Plight of the Doctor under Compulsory Health Insurance

THE Committee on Costs of Medical Care stated the overhead costs of the physician practicing his profession were 40% of his income. In all the remedial schemes suggested the argument for the low income to be allowed doctors was that it was *net income*—though it were but 60% of what he formerly earned, the elimination of the overhead, almost completely, would leave him with this amount assured and his mind undisturbed by money matters. The comparison of the health insurance schemes of Europe gave, as a rule, the plan in England as most preferred. A recent report reprinted by the Milbank Fund of an address of Dr. G. F. McCleary of England contains some welcome definite statements. In terms of our money at the present rate of exchange the average total income of the insurance doctor was \$2250 per year. From this total the physicians "accepted from the Government" a cut in rates in 1931 of 10% as a measure of national economy.

The income tax of nearly the same additional amount is "accepted from the physician" by the government. There is nothing said in the report of the maintenance expenses of the doctor—the overhead, although one-third of his calls are at patients' homes, and two-thirds at his office. His expenses must come near the 40% of gross earned by the physicians in the country, thus leaving him a net income in our present money of \$1000 per year. When Dr. McCleary delivered these lectures in this country a year ago the value of the year's income of the English insurance doctor was \$1750 in our money. Deducting the 60% for the maintenance, income taxes and reduced rates, the new income, according to this way of calculation, would be \$700 per year. These lectures on the compulsory health insurance plan of England were delivered shortly after the report of the Committee on Costs of Medical Care had been issued favoring compulsory health insurance.

HEART DISEASE AND ANESTHESIA

(Concluded from page 179)

in size and be free from murmurs. Adequate supportive measures preoperatively may enable an impaired cardiovascular system to withstand operation. Absolute rest postoperatively in poor risks, careful handling of the patient from operating room to his bed, minimizing the chances of vomiting by the choice of anesthesia and anesthetist, performing only essential surgery and producing a minimum of trauma—all these are of vital moment. The routine use of cardiac drugs in elderly normal people preoperatively is not only unnecessary, but at times harmful. If digitalis is indicated, it should be given in therapeutic doses—the route of administration depending on the state of the patient, the last choice being the intramuscular route.

In summary, let me emphasize the following:

- 1—Heart disease adds to surgical risks.
- 2—There is suggestive evidence that anesthesia directly affects the heart.
- 3—The choice of anesthesia and anesthetist and the amount of surgery done are paramount in increasing or decreasing the risk of the cardiac patient.
- 4—Heart disease is no contraindication to necessary surgery.
- 5—Better consideration of so-called surgical deaths alleged to be due to weakened heart, when the cause is elsewhere, is desirable.
- 6—The significance of a detailed cardiovascular history in surgery must be sensed, and there must be close cooperation with the internist in known cardiacs preoperatively and postoperatively.
- 7—We must use all available means at our disposal,

such as the electrocardiogram, in evaluating the cardiac surgical risk.

- 8—The intelligent use of cardiac therapy, when indicated, is of prime importance.

CANCER

(Concluded from page 183)

Begg (22) has contributed a paper on colloid adenocarcinomas of the bladder vault which he believes arise from the epithelium of the urachal canal. The treatment in his opinion should consist in the radical resection of the umbilicus and all tissues between it and the bladder, as well as of a large part of the bladder.

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Coughing and sneezing through an obstructed nose may cause middle ear inflammation.

Cultural Medicine

Medical Books

MALFORD W. THEWLIS, M.D.

Wakefield, R. I.

WHY ARE some medical books outdated when published?—*passé* before publication. Perhaps the author himself is responsible, but the publisher may have held the manuscript a year or more, and three months after the galley-proofs were submitted the book reached the market. Since the galley-proofs were returned, a certain discovery, a new treatment or a perfected operative technique may have been mentioned in the medical press, and in books bearing the same date of publication. The book may have been in the printer's hands during the latter part of 1932 and been published under a 1934 copyright in January. Such a book is nearly two years old when it comes out.

Of course, necessary changes should always be made in the galley-proofs, but there are authors who hesitate to make important corrections because of the nightmarish "author's correction" bill, often amounting to one or two hundred dollars. Author and publisher may agree that the text is not altogether consistent with the copyright date and yet think that it may get by.

Ancient text-books of medicine and surgery, masterpieces in their day, are being continued by men who specialize in lifting the faces of mummies, and often do so with data compiled by research librarians—some of the latter qualified, others far from competent.

Physicians attach their names to books that they have not written themselves and possibly never read—paying robots a dollar an hour to turn out a book because it is the thing to do. A few years ago we came across a book which, we learned later, had been written for a famous surgeon by a research librarian.

In Germany, there are more minds for sale than in this country, so they are cheaper; a medical book on any subject can be turned out in record time, supposedly written by some specialist whose name is attached to the work. A friend of ours was offered a large sum by several physicians if he would sell his manuscript, permitting the purchaser to use his own name on the book. Ghost writing is not so very common in medicine but it does exist. A medical author, capable of writing quickly and well able to give his own references from the Quarterly Cumulative Index Medicus to a competent assistant, can cover a great deal of ground in a short time. This is a satisfactory method.

Some medical authors, professionally brilliant but inarticulate, employ medical literary advisers to shape their thoughts. Another friend of ours in an European capital had several scores of books published under his name but they were written by his students and he seldom read one. He edited a medical journal for years officially but seldom read an article in his own journal.

I saw these journals on his waiting-room table in his office; patients were most impressed by his editorial ability! The editor of one of our journals seldom looks at his own publication, the actual work being done by men well trained in this work. One medical author dictated most of his books during his meals. Another paid out a good sum to a publisher as an indemnity because he had thoughtlessly given out some of the same material to another.

Medical books must be of reasonable size in order to command a good price; good enough, for book agents will not bother with cheap books because of the commissions involved—the larger the book the larger the commission. Thus we see books printed on thick paper, with considerable space on the top, bottom and sides of the pages, in order to look thick. Publishers often ask authors to fatten up their books, which accounts for the padding which often puzzles the reader.

Some publishers will take your manuscript if you agree to a thousand copies or if you will guarantee the cost of publication. When one knows these publishers it is easy to presume that any book published by them has already been turned down by several publishers who work on a straight royalty basis. One publisher followed medical journals carefully and if he saw an interesting article by a physician he would write a flattering letter and tell him that he should publish a book on that subject. There are publishers (not many) who do not give authors their royalties very often—they use this money to finance other books.

Quite a few publishers take great pride in their books and have a taste for artistic printing. The paper used is important, too, since a half-tone will show up only on the right kind of paper. English books, especially, have narrow margins and as many words on a page as possible.

My impression is that if medical books were less expensive, physicians would be better read. With the dollar at about fifty-nine cents and commodities down, medical books are still selling quite close to the peak prices of 1928. However, there are many publishers who have reduced the prices of their books.

Needless to say, some of our best medical books were turned down repeatedly by publishers before one dared to take the risk.

Medical articles are often outdated before they are published, because the medical journal could not make room for them. The publication of medical books and articles should not be delayed. It does not take long to set up a book, nor does it take long to print it.

Many professors stall as soon as they reach the top

of the hill; succeeding editions of their books prove it. Look for the dates of references and you will see that they date back five or six years. Many 1933 books contain no references past the year 1929. A recent publication of a book by an author who writes a great deal is dated 1933. There are no references after 1930; no mention made of recent advances. Thus the practitioner has a false sense of security when he looks up the latest treatment for carbon monoxide or strychnine poisoning.

A recent edition of an old work was full of references ranging from 1890 to about ten years ago. The photographs were all taken in the nineties and showed old instruments and the doctors and nurses were distinctly of the mauve decade. A new edition of a large volume on pediatrics shows references averaging five years ago.

Many books written by professors are failures; many written by their assistants are brilliant and valuable. Richard C. Cabot and Lewellys F. Barker never waste a word. Each line is essential. Georges Dieulafoy wrote like a story-teller—his medical works were as dramatic as novels—you couldn't put them down once you started. Rousseau's works in 1856 were masterpieces; many of these clinical pictures are classics today.

Very few books wear well. One that has worn well is Rousseau's Treatise on Medicine. George and Leonard's work on the Gastro-Intestinal Tract, Roentgenologically Considered, is as valuable today as it was in 1915 when it was published. Babinski's work on reflexes is up-to-date today.

A medical book may represent the life work of the author. He may have taken several trips to the Surgeon-General's library in Washington to do actual work on the volume himself. The publisher has taken great pains to have the book printed. Then the book gets into the hands of a casual reviewer. It is pathetic to see the life work of a physician disposed of by a man who does not even read the book through. A certain medical editor reviewed twenty books in an evening by just reading the prefaces. Some publishers were aware of this and insisted on preparing their own prefaces.

The average reviewer does not read a book through. He either reads it in part or picks out certain items in the index and gets a quick view of the book. Constructive criticism by a capable reviewer is of great help to authors; the reviewer who writes to a formula is as bad as the one who obviously has not read the book at all. Another type of reviewer is the man who uses the author's theories to set off his own. Such a reviewer should write his own books or be objective in his criticisms.

It goes without saying that books chopped by the reviewer are often valuable. Were I a publisher I would be very careful when sending out books for review; the publisher has a right to protect his book so that it will be reviewed by a man capable of doing so.

Some books have been written by men who do practically no work on the subject they are writing about. Abraham Jacobi started pediatrics yet he told me that he always discouraged women from bringing children to him. A work on a special branch of surgery was written by a man who seldom sees cases of this kind. A book on x-rays, pertaining to a certain specialty, was written by an x-ray specialist who allowed a professor to use his name on the book.

with by the General Practitioner. This book of 319 pages is compact—there is no padding. The price, \$3.00, is reasonable. The book is based on a series of lectures given in September, 1933. The book was printed in January, 1934—a reasonable time for publication. Most of the references are 1933; seldom does he go back farther than 1932. Some of the references are for September, 1933. The book is thoroughly up-to-date and written by a professor emeritus who has never ceased to study. He gives the general practitioner a mint of knowledge but he sticks to late methods only. Rather unusual, to say the least, but this is an ideal volume, not only because of its wealth and accuracy, but because it is a masterpiece of modern publishing. The general practitioner gets the material "hot off the griddle." The references follow the text on each page and if the general practitioner wishes he can obtain an up-to-date library by following the references. Thus you get Dr. Barker's experience and reactions besides references and the works of others if you wish to use them.

Some authors cover the ground by including all rare conditions. Thus the author uses his own volume to acquaint himself with rare diseases. It is not easy to stick to practical and common things but Dr. Barker has succeeded in doing so.

Curtis' Text-Book of Gynecology is another book which covers the ground without wasting a word. Some authors have a special ability for this kind of writing. There are many others: Beckman's Treatment, issued in February, 1934, is another masterpiece of publishing. Beckman has written a complete new edition—everything modern and evidently Beckman chopped the galley-proofs in order to bring the work down to the very minute of its appearance on the market. Beckman has the modern point of view to the nth degree.

In reading medical books the physician will do well to get different views. One should not stick to one school—e.g., the New York or Chicago school—but should get books written by men from various medical centers, such as Boston, Toronto, Baltimore, Paris, etc. The London and Edinburgh schools give a great many valuable medical and surgical books—always worth careful study. These authors are quite apt to leave out non-essentials.

Some first editions are not what they should be but you may recognize a capable author, one you may safely grow up with. He will watch his reviews carefully and utilize all criticisms. Watch his second edition; it may be quite valuable. Other authors' revisions may not be revisions at all, merely utilizing all the old material with a sprinkling of new.

There are some very capable men who should write books but will not. At times their work appears in certain reviews so that their work is recorded.

1934 is here; we must have 1934 books and medical articles. Nothing but the latest ideas will do.

One of the recent uses of the photo-electric cell is to prevent kidnaping of children by surrounding the bed or crib with its beam. Breaking or interference with the beam sets off an alarm.

—Pathfinder.

Constant pains shooting through the left breast may be due to gallstones.

Fruits taken at bedtime may cause dysuria in a prostatic patient.

Contemporary Progress

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Neurology

Histological Changes in the Nerve Fibers of the Brain in Fatal Head Injury

C. W. Rand and C. B. Courville (*Archives of Neurology and Psychiatry*, 31:527-555, March, 1934) report a study of the histological changes in the nerve fibers of the brain in 39 cases of fatal head injury observed at the Los Angeles (Calif.) County General Hospital. The gross lesions in these cases were minor contusions (7 cases); moderate cortical contusions (9 cases); severe cortical and subcortical contusions and lacerations (3 cases); intracerebral hemorrhage (6 cases); petechial hemorrhage (10 cases); cerebral compression and diffuse subdural or subarachnoid hemorrhage (4 cases). In these various lesions interruption of nerve fibers was the rule; and this interruption resulted in changes in the proximal and distal ends of the fiber, as shown by Cajal in his study of nerve fiber changes in experimental injury to the brain. The first evidence of end-bulb formation was found approximately two hours after injury; on the distal segment the survival of these end-bulbs was limited; the end-bulbs on the distal end of the proximal segment can maintain their identity for years. In the human brain these end-bulbs are entirely degenerative; when they persist "they assume the nature of a scar" at the end of the fiber. The distal segment of the interrupted nerve fiber undergoes granular, fragmentary or vacuolar degeneration with ultimate disappearance of the axis cylinder. In cases with hemorrhagic extravasations, a peculiar combination of "preservation necrosis" as described by Cajal and ordinary fragmentation occurred. As there is no regeneration of nerve fibers in the brain, any interruption indicates a permanent loss of function of the fiber and to some extent of the cell from which it arises. Just what part this plays in the disturbance of brain function resulting from non-fatal injuries depends on the severity of the injury, the location of the injured areas and the individual susceptibility of the patient.

Post-Infective Parkinsonism

F. Eschke and J. Hempel (*Deutsche Zeitschrift für Nervenheilkunde*, 133:287-297, March 12, 1934) note that the Parkinsonian syndrome following epidemic encephalitis is well known, but that a similar syndrome may develop after other infections without any history of an attack of encephalitis. They report 4 cases in which Parkinsonism was associated with recurrent tonsillitis with chronic foci of infection, including one case of recurrent rheumatic fever, associated with tonsillitis. In these cases akinetic manifestations and rigidity were more marked than the tremor—a phenomenon also noted by Economo and Stein in the early stages of postencephalitic Parkinsonism. None of these cases have come to autopsy so that the nature of the lesions causing this syndrome has not been proven, but they are apparently of the same type and location as those of the postencephalitic Parkinsonian syndrome.

COMMENT

Acceptance of postulates laid down should be governed by caution. It must not be forgotten that in many instances a "story" of "sleeping sickness" cannot be obtained, despite the most detailed and painstaking history. Also it must not be forgotten that a previous encephalitis is made much worse by acute infection of any sort, such as "heavy colds," acute follicular tonsillitis, etc. Following such acute infections the symptoms are aggravated. Also pregnancy, a normal physiologic state in women, distinctly aggravates the symptoms of epidemic encephalitis. The reviewer questions strongly the conclusions of these authors. When the frequency of acute

tonsillitis is realized, does it not seem strange that the "Parkinsonian state" did not develop until the recent epidemic of "sleeping sickness"? H. R. M.

Cellular Inclusions in Cerebral Lesions of Epidemic Encephalitis

J. R. Dawson, Jr. (*Archives of Neurology and Psychiatry*, 31:685-700, April, 1934) reports that in 2 cases diagnosed as epidemic encephalitis, intranuclear inclusion bodies were found in the degenerating nerve and glia cells in the cerebral lesions; these inclusion bodies were of the type seen in other virus diseases, so that they were considered to indicate that the lesions were due to the activity of an unknown virus. The inoculation of rabbits with brain emulsions from these patients produced no symptoms, indicating that the virus is not that of herpes simplex. Clinically these 2 cases were much alike, both beginning suddenly without much elevation of temperature, with loss of consciousness in one case and hallucinations in the other; this onset was followed in both cases by hyperkinesia and parkinsonism, then by a rapid rise in temperature and death. The pathological findings and the clinical similarity in these 2 cases indicate that they belong to a heretofore unrecognized group within the heterogeneous group of epidemic encephalitis. The author suggests the name "inclusion encephalitis" for this group.

Oral Administration of Amino-Acids in Muscular Dystrophy and Atrophy

C. J. Tripoli and H. H. Beard (*Archives of Internal Medicine*, 53:435-452, March, 1934) report the treatment of 6 cases of various types of muscular dystrophy and atrophy by the administration of glycine or glutamic acid in 10 or 20 gm. daily doses by mouth. The average increase in the excretion of creatine ranged from 48 to 303 per cent and in the excretion of creatinine from 11 to 46 per cent. A review of the literature shows that 69 cases of muscular dystrophy and atrophy treated by glycine or glutamic acid have been reported, including the authors' cases; definite clinical improvement has been observed in 51 of these cases. The conditions classed as muscular dystrophies, in which the lesions are primary in the muscles and probably abiotrophic, have all shown improvement under this therapy, especially myasthenia gravis, pseudohypertrophic muscular atrophy, and progressive muscular dystrophy. Clinical improvement has been slight or absent in the muscular atrophies, which result from nuclear lesions in the central nervous system. The authors suggest that the clinical results following administration of amino-acids will possibly serve as additional criteria for differentiating some of the more vague syndromes "which often defy classification even by the most able neurologists."

COMMENT

There is a rapidly increasing literature on the subject of glycine therapy in the dystrophies and myasthenia gravis. There is no doubt of the improvement of some cases of myasthenia gravis. The reviewer feels that ephedrine sulphate produces as effective results in this particular disorder as does the administration of the amino-acids. "More water must go beneath the bridge" before we can judge this form of therapy. Considering the general hopelessness of this class of cases, it is worth while trying. H. R. M.

Frontal Lobe Lesions with Cerebellar Manifestations

A. Gordon (*Journal of Nervous and Mental Diseases*, 79: 411-422, April, 1934) notes that in 1917 he reported 4 cases with frontal lobe lesions in all of which there had been definite cerebellar manifestations, but the cerebellum had been found intact at autopsy. Since that time he has seen a number of

similar cases, 5 of which are reported. All these 5 patients showed the classical cerebellar symptoms of ataxia of gait and station, ataxia of the upper extremities, dysmetria and adiachokinesia; but at autopsy no lesion of the cerebellum was found, and a lesion of the frontal lobes was present—an abscess in 2 cases, hemorrhage, tumor and cyst in one case each. Study of these cases during life, however, had not justified the diagnosis of a cerebellar lesion. The Holmes-Stewart test and the various tests of A. Thomas for cerebellar lesions were all negative. In typical cerebellar cases the various manifestations are all unilateral and on the side of the lesion; in the author's 5 cases, however, they were "dissociated," some indicating a lesion on one side and others on the other side; this "dissociation" of cerebellar manifestations the author regards as important in the differential diagnosis between cerebellar lesions and frontal lobe lesions with cerebellar manifestations. From a review of the literature and a study of his own cases, the author concludes that "the frontal region of the cerebrum contains a 'center for equilibration and orientation' and when the cellular elements of this center are involved in even a small degree, the fronto-ponto-cerebellar pathway originating in this center is functionally disturbed and gives rise to ataxic manifestations simulating those of primary cerebellar disorders."

COMMENT

An old problem to everyone doing neurology. One may encounter the converse situation—frontal lobe symptoms in tumors of the cerebellum. The author with a series of nine cases has had an unusual experience with this confusing problem.

H. R. M.

Lead As A Possible Cause of Multiple Sclerosis

W. Cone, C. Russel and R. U. Harwood (*Archives of Neurology and Psychiatry*, 31:236-269, February, 1934) report that in one typical case of multiple sclerosis studied pathologically at McGill University, lead was found in the spinal cord, in amounts almost as great as that recorded in patients with typical lead encephalopathy. In a case of neuromyelitis optica, lead was found in the brain and spinal cord. In 6 cases of multiple sclerosis of the type showing exacerbations and remissions, lead was found in the urine, stools and cerebrospinal fluid; in 3 cases that were studied for a considerable period, it was found that the amount of lead in the excreta increased during acidosis; and diminished under calcium therapy; there was a definite improvement in clinical symptoms also when calcium was given. In the case of neuromyelitis optica the advancing myelitis was definitely stopped and the lead disappeared from the spinal fluid under calcium therapy. It cannot be stated dogmatically "that because lead is found in the spinal fluid, in the bones and liver and in the excreta, it is therefore the cause of the disease." The findings so far indicate the possibility that lead is a possible etiologic agent in multiple sclerosis "of the exacerbating and remitting type." That lead poisoning may be present when there is no definite history of exposure has been shown by the recent studies by E. A. Park in Baltimore and E. C. Vogt in Boston on the frequency of lead poisoning in children, as demonstrated roentgenologically by the storage of lead in the bones. Auh and his associates have shown that lead once stored in the body may again enter the blood stream in response to a reaction of the body that liberates calcium; such a process might explain the exacerbations and remissions in multiple sclerosis.

COMMENT

Multiple sclerosis continues to be one of the most baffling problems in medicine. The authors present an interesting discussion of this enigma. The reviewer, without any thought of the disease being possibly due to lead, has administered calcium in cases of multiple sclerosis without any distinct benefit, and it seems to him that the case reported could well be one of "lead poisoning" simulating multiple sclerosis, rather than an instance of multiple sclerosis caused by lead. H. R. M.

Physical Therapy

Cirrhosis of the Liver Treated By Diathermy

Carrière and Martin of Lille, France, (*Bulletin de l'Académie de médecine*, 111:438-440, March 27, 1934) report the treatment of 11 cases of cirrhosis of the liver with transhepatic diathermy according to the method described by Pagniez; treatments were given for fifteen to twenty minutes with a current of 1500 to 2500 milliamperes. Ten of the cases had considerable ascites. Of these 6 were not benefitted by the diathermy treatment, but they were all in an advanced stage of atrophic cirrhosis with marked ascites and had failed to respond to any treatment; in 2 cases urinary excretion was definitely increased and the

ascites diminished by the diathermy treatments, but the course of the disease was not greatly modified. Two cases showed marked diuresis and the ascites and edema were entirely relieved; in one of these patients with hypertrophic cirrhosis the size of the liver was not reduced; there was marked subjective improvement. In the one case without ascites, with hypertrophic cirrhosis, urinary output was increased, meteorism relieved, and the patient's general well-being much improved. The authors are of the opinion that diathermy is of definite benefit in the earlier stages of cirrhosis of the liver, but that in the later stages, little can be expected of it except a diminution of the ascites in some cases.

COMMENT

The results achieved by transhepatic diathermy seem worthy of further investigation because cirrhosis of the liver with ascites is extremely prevalent and difficult to treat with dry therapy.

C. R. B.

Physical Therapy in Postoperative Reconstructive Surgery

W. Bierman (*American Journal of Surgery*, 23:314, February, 1934) notes that physical therapeutic measures are used postoperatively, in reconstructive surgery, chiefly to maintain a plentiful blood supply "to nourish and aid healing," to prevent edema and stasis, and to sterilize the wound. To maintain the blood supply hyperemia is best induced for such surfaces as the face or abdomen by phototherapy; for the extremities by paraffin or whirlpool baths; if the dressing cannot be removed, heat is induced by high frequency electromagnetic fields. In some cases high-frequency sparks or the effluvium from a de Kraft resonator is effective, especially if there is pain. To prevent or remove stasis and edema, the static brush discharge is particularly effective; this may be applied immediately after operation, as it is painless. Where a wound cannot be made sterile, ultra-violet irradiation is useful for superficial germicidal effects, with care to avoid marked erythema. For deep irregular wounds, ionization by the electrolytic current employing zinc, silver, copper, iodine or chlorine is indicated. After firm union is established, massage or mechanotherapy is useful.

COMMENT

A variety of reconstructive physical measures can be successfully employed in the treatment of many postoperative surgical conditions but must be used in the proper sequence and with careful technique of application at all times. C. R. B.

Diabetes and Ultra-Violet Irradiation Therapy

N. Morris and D. Campbell Suttie (*British Medical Journal*, 1:614-616, April 7, 1934) note that several reports have recently appeared in literature showing definite benefit to diabetic patients from ultra-violet therapy. These studies have related to adult patients, but the authors have made a study of the effect of ultra-violet radiation on diabetic children. Preliminary studies of the immediate effect of radiation on blood sugar showed that in normal children, ultra-violet irradiation produced an immediate fall in blood sugar in 4 out of 5 children; and in diabetic children, an immediate fall in 5 out of 10 tests on 6 diabetic children. In 10 diabetic children, whose diet and insulin requirement were known, ultra-violet irradiation was given to the whole body twice weekly; 4 diabetic children under similar dietetic and insulin treatment were used as controls. The carbohydrate tolerance improved in 4 out of the 10 children given ultra-violet therapy, but decreased in 6 cases; it improved in one of the 4 controls and decreased in 3. There was no significant improvement in growth and general health in the irradiation group which could be attributed to the irradiation; one patient (a boy of thirteen) stated that he felt better after the ultra-violet treatment was commenced.

COMMENT

It is the prevailing belief in this country that the use of ultra-violet radiation is contra-indicated in the presence of diabetes. Further research seems to be necessary before accepting this view.

C. R. B.

Selection of Cases for Ultra-Violet-Ray Treatment

E. J. MacIntyre (*British Journal of Physical Medicine*, 8:178-180, March, 1934) points out the necessity for careful medical control by a qualified physician of ultra-violet-ray treatment. In rickets ultra-violet rays are definitely indicated. Abrasions and wounds of the skin and ulcers usually heal under ultra-violet-ray treatment, but care must be taken to investigate any skin lesion suggesting cancer or syphilis; the ultra-violet ray may be used as an adjuvant to specific treatment for syphilitic lesions, but is contra-indicated in cancer. In

Inflammatory lesions in the nose and throat respond well to ultra-violet therapy; the author has found that diphtheria carriers may be successfully treated by this method. Both chronic bronchitis and bronchiectasis are definitely benefited by a prolonged course of ultra-violet light, but care must be taken to exclude cases of active pulmonary tuberculosis, in which radiation is definitely contra-indicated. Carefully selected cases of pulmonary tuberculosis with much fibrosis may be treated with benefit; and tuberculous laryngitis may be treated by local applications of ultra-violet without detriment to the general condition. In convalescence from rheumatic fever, ultra-violet radiation has proved of great value in the author's experience in restoring vitality and reducing the incidence of sequelae; it is not indicated in the acute and sub-acute stages. Cases with rheumatic carditis benefit but their reaction must be carefully watched. Ultra-violet radiation is of value after an attack of acute nephritis, and in some mild cases of chronic nephritis, but is not indicated in cases with gross lesions and heavy albuminuria. The nervous system reacts favorably to the ultra-violet; muscle tone is improved; and neurasthenic patients definitely benefited. The endocrine system is stimulated by the ultra-violet, and mild degrees of hypothyroidism may be cured. Ultra-violet radiation is, the author believes, the specific treatment for tuberculosis of the bones, joints, glands, and serous membranes, combined with orthopedic treatment in lesions of the bones and joints; the only contra-indication in these conditions is the presence of long-standing sinuses showing amyloid degeneration. The tolerance of patients to ultra-violet radiation varies; some very hypersensitive patients may have to be excluded from treatment; but most patients are benefited "within their range of tolerance."

COMMENT

Ultra-violet-ray treatment has been used extensively in the treatment of many conditions with the exception of active pulmonary tuberculosis, malignancy and syphilitic cases. The cases, however, should be thoroughly studied and treated under supervision as to proper dose and duration of treatments because many harmful effects may be produced by careless and faulty technique.

C. R. B.

Chemical Changes in the Blood Produced by Hyperpyrexial Baths

H. Hopkins (*Archives of Neurology and Psychiatry*, 31:597-604, March, 1934) notes that the frequent occurrence of clinical signs of tetany in patients given hyperpyrexial baths has led to a study of the chemical changes in the blood. At the Neuropsychiatric Clinic of Leland Stanford University, blood chemistry studies were made on 12 young adult patients before the bath, and at the height of the febrile reaction in the bath; these patients had minor complaints and no organic disease; the bath raised the body temperature to 105 to 106° F. The analysis showed the chief changes observed in the blood as a result of the hyperpyrexia were alkalosis; dilution of the blood; hypoglycemia; an increase in the inorganic phosphorus and a decrease in the calcium. All of these changes have "the general combined effect of exciting nerve tissue"; and undoubtedly have a definite influence on the appearance of the nervous and mental phenomena observed during hyperpyrexial baths.

COMMENT

The findings in the blood produced after hyperpyrexial baths are worthy of notation because artificial fever therapy is now being given for many diseases.

C. R. B.

Hyperpyrexia by Diathermy

A. C. Jones (*Archives of Physical Therapy*, 15:155-166, March, 1934) reports the use of fever therapy with hyperpyrexia produced by diathermy in various diseases. Cuff electrodes have been used in the past three years, although in the cases reported both the body electrodes and the quadruple cuffs were used, with rubber sheets and blankets or a special sleeping bag for heat insulation. With cuff electrodes a milliamperage of 750 to 1200 ma. was used, with body electrodes, 3800 to 4000 ma. Temperatures were taken by mouth and axilla every fifteen minutes, or by a rectal thermophore. The average range of maximum fever produced in the cases reported was 104.5 to 106° F., though higher temperatures have been observed, and some paretics were subjected to a temperature of 107° F. for as long as four hours. Sedatives were usually employed, as patients suffer marked discomfort without them. It was found that fever therapy caused an increase in leucocytes with a relatively high percentage of polynuclears and staff cells at the height of the fever; in cases of an infectious type, this leucocytosis often persisted for several weeks after hyperpyrexia. In the cases treated, the greatest percentage of cures was obtained in gonorrhoea and gon-

rheal arthritis. Most cases of infectious arthritis were definitely benefited; other types of chronic arthritis showed some palliation but not as marked improvement as the infectious type. Remissions in general paresis were as satisfactory as those obtained with malarial therapy. Additional work is necessary to determine the optimum temperature, duration and frequency of treatments to obtain the best results with this form of fever therapy.

COMMENT

The results from the use of hyperpyrexia in arthritis show improvement rather than cures and should be so labeled. Hyperpyrexia in general paresis by diathermy still seems second to malaria therapy; until more definite data can be obtained as to the equal or superior value of the former we must reserve final judgment.

C. R. B.

Public Health, Industrial Medicine and Social Hygiene

The Carcinogenetic Agent in Anilin Tumors of the Bladder

G. H. Gehrmann (*Journal of Urology*, 31:126-137, February, 1934) reports that in a plant manufacturing coal tar dyes since 1916, cystoscopic examination of 532 men employed showed bladder tumors in 25 cases, or 4.5 per cent.; in addition there were 16 cases in which hemorrhagic areas were found in the bladder. In another group of 55 men examined cystoscopically, 2 cases of bladder tumor were found—3.6 per cent. Of the 25 positive cases in the first group, 14 were papillomata, 8 definitely carcinomas, and 3 "questionable carcinoma"; all of these men were exposed to beta naphthylamine or benzidine; only 2 had not been exposed to the former product. In the second group both men had been exposed to alpha naphthylamine, which as made in the United States contains about 5 per cent beta; the tumor in these cases was papilloma in one case and carcinoma in the other. No cases of bladder tumor have been found among aniline workers in this plant; but the combined experiences of the dye industries in Germany, Switzerland, England and America indicate that aniline, alpha and beta naphthylamine and benzidine are the carcinogenetic agents in the coal tar dye industry. Bladder tumors may appear any time after two years' exposure to the carcinogenetic substances; removal from the dye operation does not eliminate the danger of a future development of bladder tumor. At the plant under the author's medical supervision, employees working in aniline, alpha or beta naphthylamine and benzidine are required to have a cystoscopic examination once a year, a urinary examination every three months, and with the appearance of any blood in the urine or bladder symptoms, an immediate cystoscopy. It has been the practice to remove any man developing bladder symptoms or tumor from the area where he has been working, but as this does not prevent the development of cancer, the author considers it preferable to treat the condition and return the man to work in the area, as this prevents exposure of another man; this is the procedure followed in Germany. The adoption of a completely closed and properly ventilated process together with careful medical supervision and protection will eliminate the hazard.

Mercury-Laden Air

A. M. Fraser, K. I. Merville and R. L. Stehle (*Journal of Industrial Hygiene*, 16:77-91, March, 1934) state that prolonged inhalation of air containing mercury vapor is recognized as an important hazard in certain industries, yet there is no exact information concerning the concentration of mercury in the air that is definitely toxic. Accordingly the authors undertook experiments on dogs exposed to the continuous inhalation of mercury vapor of known concentration. It was found that inhalation of a concentration of 1.89 mg. mercury vapor per cubic meter of air for eight hours daily during a period of forty days did not produce any evidence of mercury poisoning; the minimal concentration of mercury vapor that invariably produced chronic toxic effects under similar conditions was 3.05 mg. per cubic meter. Higher concentrations were proportionately more toxic, and produced more acute effects. In a dog weighing about 12 kg. at the time signs of mercury poisoning appeared, the average daily excretion of mercury was about 0.5 mg. If man is equally susceptible to mercury vapor, the average daily urinary excretion of mercury when symptoms of mercury poisoning become evident, would be about 3 mg. daily. Experiments on the absorption of mercury vapor indicate that when the concentration is from 2.91 to 26.18 mg. per cubic meter of air, the proportion absorbed varies from 21.3 to 26.6 per cent. (averaging 24.16 per cent.) of that inhaled.

COMMENT

The article by Gehrmann and that by Fraser, Merville and Stehle give an indication of new health hazards arising from new industrial processes. A whole new field of physiological and pathological research is growing up for the study of new factors in industrial environment. That branch of medicine which deals with these problems is becoming more and more specialized and its technical aspects more intricate, keeping pace with technological advances. W. C.

Control of Enteric Disease by Examination of Specimens From Food Handlers

R. Gilbert and M. B. Coleman (*American Journal of Public Health*, 24:192-193, March, 1934) question the advisability of attempting to control enteric disease by examination of specimens collected without selection from all food handlers. In two state hospitals in which outbreaks of typhoid fever had occurred, 2,169 specimens from 866 food handlers were examined, and 3 carriers were found; thus the average number of specimens examined to find one carrier was 723 at a cost of approximately \$1,500.00. In the examination of 6,269 specimens from 3,583 food handlers in other institutions in which epidemics of typhoid were occurring or from which cases of typhoid had been recently reported, *B. typhosus* was found in specimens from 47 individuals, and *B. paratyphosus* A. or B. in 3 others. In 18 instances, these organisms were isolated from one specimen only, indicating that these individuals may have been recovering from an infection. Every carrier of *B. typhosus* will not be detected by an examination of only one or two specimens. The authors believe most carriers of typhoid or paratyphoid bacilli among food handlers will be detected by examination of series of specimens from those who have had enteric disease, colitis, or cholecystitis, or whose immediate associates have had typhoid or paratyphoid fever. In some instances where cases of enteric disease have occurred among patrons of a restaurant or a milk route, specimens from all food handlers concerned should be examined if a carrier is not found among those with suspicious history. The authors believe that the best method of dealing with the carrier problem is to require repeated examination of specimens from patients convalescing from typhoid fever or allied infections to detect those who will become carriers. Since this has been done in New York State, there is no record of any case of the disease traced to persons who have been released after fulfilling the requirements.

Venereal Disease Control in Canada

Gordon Bates (*Canadian Public Health Journal*, 25:60-66, February, 1934) outlines the methods and results of venereal disease control in Canada. This began with the passage of a comprehensive law in the Province of Ontario in 1918; similar laws were subsequently enacted in the other provinces. The laws recognize venereal disease as a communicable disease and require reporting of cases to medical officers of health. Private physicians, clinics and hospitals report venereal cases only by number at first; cases are reported by name only when treatment is refused or is not kept up. A Venereal Disease Department has been established as a part of the Dominion Department of Health; and money has been appropriated by the Dominion to be distributed among the provinces where the provinces contribute an equal amount for the establishment of clinics and for other venereal disease work. A total of 102 venereal disease clinics have now been established in Canada. Routine Wassermann tests in hospitals and other institutions have shown a definite decrease in the amount of late syphilis. Thus at the Toronto General Hospital, the percentage of positive Wassermanns was reduced from 12.8 per cent. in 1916 to 2.5 per cent. in 1932; while at the Hospital for Sick Children in Toronto, the percentage was reduced from 5 to less than 1 per cent., indicating a very definite reduction in the incidence of congenital syphilis. There has also been a reduction in general paralysis of the insane in Canadian hospitals. The Canadian Social Hygiene Council has been organized for the education of physicians and the public in regard to the methods of control of venereal disease.

COMMENT

It is encouraging to find in this article, as in reports from Great Britain, Germany and the Scandinavian countries, evidence that progress is being made in the fight against syphilis. There is good reason to believe that similar progress is rewarding the similar efforts in the United States. W. C.

Modern Trends in Public Health Administration in Cities

J. P. Koehler (*American Journal of Public Health*, 24:363-366, April, 1934) notes certain trends in public health administration

in cities indicated by reports from 20 city health officers that were sent to him. As the first of these trends he notes a more efficient and conscientious appraisal of all health activities and the elimination of the less essential services. Most cities have reduced expenditures for health bulletins, reports, etc., but there is a tendency for health officers to reach the public through the public press and the radio. Many cities have curtailed their school hygiene programs, but the author is convinced that very few public health services can safely be curtailed to any extent. The second trend in city health departments is toward coordination and consolidation; various divisions are being consolidated; services not requiring health department supervision—such as sanitation and housing—are being transferred to other departments. A third trend is the tendency to center the work on disease prevention in the younger age groups, such as diphtheria immunization of children and tuberculosis detection programs among school children. The last trend noted is the tendency to turn over to private physicians certain old established health services; the author is of the opinion that such a change must be made "in an orderly, unselfish, and intelligent manner" or there is "danger that everyone concerned will sooner or later suffer from an inadequate and impractical public health program." Cooperation between the health administration and private physicians is certainly desirable, and a public health program should be developed "to which not only all health officers can conscientiously subscribe, but which will also be approved by the medical profession."

Ophthalmology

Recession of the Levator Muscle for Exophthalmos in Exophthalmic Goiter

I. Goldstein (*Archives of Ophthalmology*, 11:389-393, March, 1934) finds that it is sometimes necessary to correct the defective closure of the lids in the exophthalmos of exophthalmic goiter, in order to protect the cornea, either before thyroidectomy or when the exophthalmos persists after operation. He has devised an operation on the levator muscle for this purpose. Previous to operation, the distance between the free margin of the upper lid and the upper limbus is measured in the vertical meridian of the cornea, also the distance between the free margin of the lower lid and the lower limbus of the cornea. The sum of these distances represents the amount of recession of the levator muscle necessary. In performing this operation, the lid may be everted and the incision made through the conjunctiva, or the incision may be made through the skin of the upper surface. When the levator muscle is exposed and freed from its attachments, three double-armed silk sutures are passed through it and brought out and tied just beneath the brow. If there are no complications, the eye is dressed in two days, and the sutures removed in five days; if there is any corneal ulceration, the eye is closed for a week. Operation is not indicated if there is a serious loss of vision. The author reports 5 cases operated by this method, both eyes being operated in 3 of these cases. In 4 of these cases the operation was done because of persisting exophthalmos and inability to close the eyes after thyroidectomy. Overcorrection did not occur in any case, and all the patients were able to close their eyes during sleep; the exophthalmos was not influenced, but the facial expression was more normal after operation.

Iridodialysis as a Clinical Entity

B. W. Key (*American Journal of Ophthalmology*, 17:301-313, April, 1934) reports 7 cases of iridodialysis, 4 from his own practice, 2 from literature, and one reported to him by Wendell Hughes. From his study of these cases, the author concludes that iridodialysis is a clinical entity, although it may occur in association with other pathological changes. The torn iris margin may become spontaneously reattached or replaced. Such spontaneous reattachment is favored by prompt treatment with atropine instillation and complete rest. Replacement is to be attributed in such cases to three factors: Mydriasis from atropine; blood absorption and organization; fibrinous exudate incident to the hemorrhage and the reaction to the traumatism. In cases with larger defects a simple operation gives satisfactory results. The operation used by the author is as follows: A keratome incision is made at the site of the iridodialysis in such a way as to obtain a large conjunctival flap with some sclerotic tissue; the torn margin of the iris is grasped and slightly withdrawn; a fine silk suture is placed through this iris margin by a single turn of the needle; when the forceps releases the iris it springs back into the anterior chamber; the suture is then carried through the scleroconjunctival flap and tied; this unfolds the iris section and brings it into the desired position by a very slight incarceration of a few fibers of the

(Continued on page 197)

Medical Times

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Princes of Medicine

The Golden Membership Anniversary Reception and Dinner tendered on May 24th to the eight men (Bartley, Browning, Cochran, Gildersleeve, MacEvitt, Moitier, Pilcher and West) who have been members of the Kings County (Brooklyn) Medical Society for fifty consecutive years was a fine gesture of affection and honor.

These eight men represent, in the aggregate, a record of personal worth, character and professional service that is as splendid as it is vast.

Such men, as we view them, against the contemporary background, are not in any narrow sense the product of their period. That would be a bourgeois judgment, worthy of Mencken's smug rotarian world. It would be doing them an injustice to say so. They are civilized men and aristocrats who have pursued a high-minded course despite the machine era in which they have flourished, an era characterized by ruthless industrial exploitation, predatory finance, capitalism, unconscionable commercial

piracy, moral bankruptcy and hypocrisy, political corruption, rampant crime, cheap ballyhoo, a debased press, a nearly sterile art and culture and parochial vision; an era in which war has been an ethical pursuit, in which the most vicious distribution of wealth has been rationalized by regimented moralists, publicists and academicians, and in which poverty and despair, and much of disease, have been respectably institutionalized; an era in which preparedness for war has been a sacred duty but in which no artillery has been powerful enough to be trained against insanitary tenements at our very doors.

Like Marcus Aurelius in the darkness of a Roman era, each one of these princes of the kingdom of medicine has lived up to the great traditional principles of his profession while he adjusted himself to a sick society and achieved the miracle of his life.

Jongleurs

The rank and file of us, before the medical genius, are vanquished. For medicine is a competitive science and art. Each one strives to excel. It is a great battle, with the cure of bodies as the stake.

So when a Banting or a Behring appears and worsens us in this divine strife, he seems to us like the *jongleur* who preceded the Normans into battle at Hastings. We, the rank and file, are like King Harold's clumsy foot-soldiers, "who only knew how to cleave coats of mail by blows from their battle-axes," whereas the medical genius is like the *jongleur*, who astonished the dull Saxons by approaching them with a song—the Song of Roland—performing nimble and clever tricks all the while. Arrived before the English, the *jongleur* cast his lance three times in the air, then his sword, and caught them again by the handles. This, to the dumb Saxons, doomed to be butchered or yoked like cattle by the dexterous Normans, seemed sheer magic.

So the easy gestures of a medical genius seem also like magic to the rank and file.

The Anatomy of Melancholy

In 1621 Robert Burton wrote a book, *The Anatomy of Melancholy*, which went through several editions and is still a masterpiece. It is one of the great works in literature.

Burton's analysis of conditions in 1621 might well apply today, for he said: "How would our Democritus have been affected to see so many lawyers, advocates, so many tribunals, so little justice; so many laws, yet never more disorders; the tribunal a labyrinth; to see a lamb executed, a wolf pronounce sentence? What's the market but a place wherein they cozen one another, a trap? Nay, what's the world itself but a vast chaos, a theatre of hypocrisy, a shop of knavery, a scene of babbling, the academy of vice? A warfare, in which you must kill or be killed, wherein every man is for himself; no charity, love, friendship, fear of God, alliance, affinity, consanguinity, can contain them. Our goddess is Queen Money, to whom we daily offer sacrifice. It's not worth, virtue, wisdom, valor, learning, honesty, religion, for which we are respected, but money, greatness, office, honor."

As a cure, Burton suggested diet and fresh air, but above all fishing, which is "still and quiet, and if so be the angler catch no fish, yet he hath a wholesome walk and pleasant shade by the sweet silver streams."

So, in 1934, perhaps the President said to himself, "Let's go fishing." Perhaps we all should say the same thing.

M. W. T.

Sickness and the Income Tax

The fact that France, a modern civilized state, recognizes the right of the citizen to deduct from his income the cost of sickness, tends to fortify in the minds of American physicians who have given thought to the subject the soundness of the principle involved.

The regular Paris correspondent of the *Journal of the American Medical Association* writes under date of March 14, 1934: "Certain clients [of physicians] are entitled to deduct from their income the money needed for their treatment in the event of a protracted disease."

The favorable effect of this practice upon the French doctor's earnings requires no argument. Both doctor and patient are helped.

Why can not the same enlightened policy be adopted in this country?

Polygamy in the Future State

Scotland promises to lead the European countries in respect to low birth rate. The 1933 rate was the lowest on record and prompted Mr. W. H. Phillips, retiring president of the Association of Registrars of Scotland, to say in his address to the association, early in May, that "public opinion would countenance, and probably insist on, some form of polygamy until the balance of population had been restored," in the event that the population should decrease further.

So the next step in our neopaganism will presumably be polygamy, if a very low birth rate is what determines that sweet institution.

We don't know whether Mr. H. G. Wells covers this point in his "*The Shape of Things to Come*," but it is easy to fancy what the *ménage* is going to be like in the year 1950—that is, in Scotland (presumably sanctified by the gentlemen of the cloth who specialize in the blessing of battle-flags).

Medicine and the Medieval Drama

In his *Medicine: a Voyage of Discovery* (Farrar and Rinehart, Inc., 1934), Josef Löbel points out that the development of human civilization bears the closest relationship to medicine. In the course of this discussion he quotes Gottstein as attributing "the increase in the power of the clergy during the Middle Ages to the prevalence of epidemics, the self-sacrificing heroism of the nursing orders, the numerous bequests that came to the Church owing to the renunciation by the laity of all earthly goods, the great revolution in religious opinion occasioned by the terrible misery—all these conditions contributed to increase the power of the church to the highest degree. That in itself, however, became one of the circumstances leading to the reform movement, and thus Luther, and Protestantism altogether, would probably never have come about but for the medieval plagues."

This passage delineates, interestingly, the medical background of the medieval drama.

Those High Diastolic Pressures in Young Adults

The main thesis of Lewis Browne, in his recently published book, *How Odd of God* (The Macmillan Company), is that many Jewish characteristics and traits are due to long urbanization. "Almost all Jews are city folk, and almost all Gentiles (mentally if not also physically) are still country folk." There is a distinction in

the pattern of their respective economies. Browne hails chiefly in the Zionist movement its deurbanization of Jewish life, which he (himself a Jew) sees as the solution of certain problems.

What interested us especially in this brilliant generalization is Browne's parenthetical phrase in the foregoing quotation. May not the exceedingly long urbanization of the Jews as compared with others bear very decidedly upon certain of their disease proclivities? We have particularly in mind so-called hereditary vascular degenerative phenomena. Heredity is sometimes an alibi.

City life probably carries within itself the seeds of its own dissolution. It is a thoroughly unnatural mode of existence, despite the specious arguments of some public health experts. Doubtless we shall now feel the wrath of these gentry.

A Constructive Critic

The Physicians' Art Show at the Academy of Medicine in New York City elicited an interesting criticism from Augustus Lukeman, the distinguished sculptor. He remarked, after viewing the show on Easter Sunday, that he should hate to place his life in the hands of any surgeon who could not see forms and structures more accurately than the exhibitors at the Academy.

Perhaps the surgeon needs a training in art. The men who exhibit at the Academy are amateurs. They would be better surgeons if a training in art enabled them to see forms and structures more accurately.

The discerning eye of Lukeman perceived at once shortcomings of the sort under discussion, just as the surgeon would perceive at once the clumsy hand of a sculptor attempting to operate on a patient.

Training in anatomy and surgery would make better sculptors; training in art would make better surgeons; what we need is a fusion of apparently disparate arts; all art is one.

Compulsory Health Insurance Fails in England

While many forces are attempting to bring about in this country an insurance system similar to that of Britain it is well to recall the words of Sir Henry Brackenbury, active in the British Medical Association while that organization was concerning itself with the policies and development of health insurance:

Today, more than ever, I find public attention—the attention both of those who provide the money and of those who receive it—concentrated on the cash benefits which may be claimed rather than on the medical attention which may be secured. To a not inconsiderable degree the national health insurance system is in danger of becoming a gigantic machine for the distribution of shillings and only secondarily a beneficent medical and health service.

One can easily imagine the value of the British scheme with respect to preventive medicine and public health.

A sympathetically administered poor law, thinks Sir Henry, would probably better serve many beneficiaries of the present insurance system.

It is obvious that Sir Henry, long intimately acquainted with the system, regards it as a failure. If the British people desire to continue some sort of insurance system, he suggests that it "should be on a voluntary basis." A voluntary system "would avoid the difficulties and abuses which most of us have experienced as arising when the opportunity for cash payments is compulsorily extended to those whose ingrained habits and modes of thought prevent them from appreciating the conditions

with which those opportunities are surrounded. I doubt, indeed, whether it will be possible for the nation to continue much longer upon the present lines."

As to the panel doctors themselves, the recent ten per cent cut reduced their scale of living to a deplorable point, affecting most notably their children's educational budget.

The great British profession has been thoroughly exploited to feed, among other things, the egotism of a Lloyd George.

We have to beware, in this country, of certain carbon copies of Lloyd George, would-be perpetrators of socialization who would give us something even worse than the British system. What would the doctors matter, in the hands of politicians bent primarily upon doles to the mob and bureaucratic jobs for henchmen?

We are protected for the time being, not by any power of our own, but by the vast federal expenditures for other purposes and the present mighty burden of taxation.

Hypothesis and Speculation

An hypothesis is a bridge built by the scientifically inspired imagination, thrown from the edge of the known across a chasm to the unknown lying on the other side, over which we can pass to explore particular regions of the unknown and confirm or disprove suspicions and make new discoveries. A scientific speculation amounts to the same thing.

If we waited until everything was absolutely proven without hastening or facilitating the getting of proof by the use of hypotheses and speculations, scientific advance would be very slow. Isaac Newton, after he observed the fall of the apple, did not wait until he had observed everything within his scope to see if they all fell, but speculated on the subject; he made the hypothesis that every material object attracted every other material object in accordance with some general law, and then sought the proof. Speculation indicates ways in which to proceed in order to find evidence.

The use of speculation and hypothesis in science should not be indulged in extravagantly (we should be sure that the imagination that builds the hypothesis is scientifically inspired); nor, on the other hand, should these aids to scientific investigation be lightly decried.

E. E. C.

When Our Art Is Fettered

The doctor oftentimes is unable to do justice to patients, many of whose ailments he sees clearly enough are the result of unintentional cruelties incidental to the social order. If a woman is tired and nervous and full of aches and pains because of unavoidable factors linked with her family life, economic status, past obstetric strains and what not, from none of which she can be extricated, her medical attendant may be, as a physician, quite powerless to act effectively. If a young man is malnourished and prone to respiratory infections because he is compelled, for economic reasons pertaining to the family, to slave day and night for some highly geared corporation, the doctor's advice and cod-liver oil and milk and cream may accomplish less than nothing. We know what these people need but we cannot give it to them. We have to be very careful indeed not to add to the cruelties that bear upon these patients; thus, where an open-air life in a mild climate is undoubtedly indicated in a certain class of patients, yet whose means and circumstances do not admit of it, it is a needless cruelty

to suggest it. In these circumstances our function approaches more nearly to that of the friend and priest than that of the physician.

Common Sources of Bromism and Iodism

Many cases of acne are due to bromism but in those who are not taking bromides as medication we may still find bromism from eating white bread. Drs. Fred Wise and Marion Sulzberger, editing the *Year Book of Dermatology and Syphilology*, point out that potassium bromate is used in making bread and that it is reduced to a bromide during baking. In sensitive individuals this may cause a skin eruption. It is well to do a urine test for bromide in all cases of acne. Many medicines, especially headache medicines and cold remedies, contain bromide.

Drs. Wise and Sulzberger have also called attention to iodism from iodized salt and from foods prepared with agar-agar. Some of the vegetables contain iodine.

These authors point out that in sensitive individuals seborrheic and furunculoid conditions, alopecias and acnes may be influenced in some way by disturbances in the iodine and bromine metabolism.

These investigations open up some interesting angles.

M. W. T.

Miscellany

A Voice from Beyond the Styx (A. D. 1935)

I am one of the 410 women whose maternal deaths during 1934 were recently declared preventable by a Committee of the New York Academy of Obstetrics. Indeed, I am one of the 64.1 per cent of the 410 for whose deaths physicians were held responsible.

I died in June, 1934, of postpartum hemorrhage.

Now, the truth of the matter is that I did not place myself under my doctor's care until I had reached the fourth month of pregnancy, although I had been living in the world for thirty-three years. During those thirty-three years many things had happened before this doctor came into my life. I and my parents before me had been victims of the prevailing economic factors, which had certainly not been a splendid preparation for my motherhood, I had married late, and I had deliberately postponed motherhood for years.

The doctor, a well-trained and conscientious man, did the best he could to care for me prenatally. He kept very close track of my diet, especially with respect to vitamin A, and took carefully into account my exercise, nutrition, elimination, urine, blood pressure, pelvic measurements, etc. At the eighth month he had three of my teeth extracted because of root infection. The bleeding and clotting time, then, was apparently normal.

When the time came I was delivered in a well organized and well appointed hospital and I can say nothing against my nursing care, thoroughness of preparation, or the kindness of any of my attendants. I was properly dealt with from all technical and human standpoints.

My labor was long, exhausting and painful, except in so far as it was reasonably mitigated by partial anesthesia. The actual delivery was instrumental and not unduly prolonged or damaging to the child.

Nevertheless, a hemorrhage ensued which proved fatal to me despite all my devoted attendant's skilful and most intensive efforts by way of packing, pituitrin, er-

got continuous clyses and transfusion. The placenta had been allowed to separate normally, without undue haste or pressure, the process being carefully gauged by a trained hand on the fundus. After expulsion of the placenta, which was aided after the return of the pains, there were fair contractions. Despite the contractions, a persistent bleeding, not very profuse at any given time, and not from a cervical tear, took place. It did, indeed, seem that the blood itself was at fault in some degree.

Mine, I am told, has been classed as a preventable death. It is held, I believe, that there must have been some blood deficiency which was not discovered and corrected. Calcium gluconate and viosterol, it is said, would have tended to insure me against undue bleeding at the time of my confinement,* and transfusion at the time of a hemorrhage does not make amends for previous neglect.

My own feeling in the matter is that some of the causes of my death probably existed long before I ever saw the doctor and even before my pregnancy. It might not have been possible for the doctor to eliminate these causes unless he had cared for me from infancy instead of for a few months, and even then I cannot quite see how he could be held responsible, for example, for my social hardships and social behavior. As regards the calcium question, I have discovered that some doctors are skeptical as to its value as a prophylactic against undue bleeding of this type.

So, with regard to this matter of preventability, it seems to me that it must often be impossible to determine exact percentages of responsibility in these cases, studied on either a statistical or individual basis.

In my own specific case, I do not feel that I can impute culpability to the doctor and I am wondering whether the percentage of culpability in the other deaths is really as high as stated. Frankly, I doubt it. In so far as I have taken this question up with the women themselves, who are now well informed on their own cases, I have found their judgments much fairer to the doctors concerned than those of the Committee.

THE UNKNOWN MOTHER.

* Richardson, Illinois State Journal, June, 1931.
Bardenheuer, Abstract in J.A.M.A., October 12, 1929.

Report of a Case of Mastoiditis

(Concluded from page 182)

- An abscessed ear should be kept under observation until it is healed. It should not, except in unusual cases, discharge beyond four to six weeks.
- Complete thrombosis of and abscess formation in the lateral sinus may occur without the presence of chills.
- Blood transfusion by the direct method is a valuable therapeutic agent to combat the bacteremia and septicemia in these cases.
- The lack of any definite reaction following transfusion is worthy of note.
- Patients with chest complications will recover.
- Facial nerve paralysis may recover after nine or ten weeks' duration.

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Your friends employ you because they believe you have more ability than some other physician. They don't call you because they are friends unless they have ringworm—or something.



Associated Physicians of Long Island

Program of Summer Outing

The summer outing of the Associated Physicians of Long Island will be a day of golf at the Crescent Country Club in Huntington, a scientific meeting at the Carnegie Institution in Cold Spring Harbor, an inspection tour of the State Fish Hatchery, and finally a dinner at the Crescent Country Club. The date for this day of relaxation and recreation in the country is Tuesday, June 12.

The president, Dr. Thomas B. Wood, and the chairman of the entertainment committee, Dr. Charles Anderson, will greet members fittingly at the Crescent Country Club in Huntington, L. I., at 1:30 P. M., Tuesday, June 12th. The fine facilities of this magnificent club will be at the disposal of members, and a larger delegation than usual are signing up for golf.

The scientifically inclined will then be transported to the next town, Cold Spring Harbor, where something unique is in store. At 2:30 P. M. members will convene at the Carnegie Institution in the Department of Genetics to be the guests of Charles B. Davenport, Ph.D., for the afternoon. On the shore-front of the harbor lie a hundred acres of ground with the administration buildings, green houses, pigeon houses, animal houses and gardens housing the station for experimental evolution and the Eugenics Record Office. This is one unit in the thirty-million-dollar endowed Carnegie Institution of Washington, which includes branches in Florida, California, Baltimore, Boston and Albany. The Cold Spring Harbor research station under the directorship of Dr. Davenport is investigating the ultimate visible units of chromosome structure, using the jimson weed, reproduction and growth in mice, the chemical difference in pigeon eggs of each sex with attempts at sex control, studies of racing capacity in race horses, and studies on secretion of endocrining glands. The work of the Eugenics Record Office is of the nature of a clearing-house for the analytical indexing of important traits of American families, the gathering of eugenical data, particularly in state institutions, studying the highlanders of the Appalachians, the Amish sect of Pennsylvania, Mormons of Utah, albinos in Massachusetts, pellagra in Carolina and consanguinity in the islands of Maine, with special interest in harelip, goiter, epilepsy, and feeble-mindedness. There will be ample opportunity for inspecting the New York State Fish Hatchery across the street, where trout may be observed as large as the traditional ones which "got away."

Upon returning to the Crescent Club, a business meeting will be held at 5:30 P. M. with Dr. Thomas B. Wood presiding. New members will be proposed at this time. At 6:30, the golfers will be back, ready to join the others about the traditional punch bowl, and dinner will follow immediately. After dinner Judge Charles Stoll of Hicksville, Long Island, will speak on the Stoll-MacCracken Arctic Expedition under the auspices of the American Museum of Natural History. Judge Stoll will illustrate his address with moving pictures.

Fundamental Difficulties in Treatment of Peptic Ulcer

Walter Lincoln Palmer, Chicago (*Journal A. M. A.*, Nov. 18, 1933), presents evidence that shows that ulcer formation is dependent on the presence of acid gastric juice. The fundamental difficulty in therapy is conceived to be that of protecting the lesion or the cells of the mucosa from the destructive effect of the acid. Mucin or some such substance may form a coating over the surface of the ulcer and thereby protect it from the attack of the acid, but satisfactory proof of this has not yet been produced. Mucin does not accomplish complete neutralization of the gastric free acidity. Atropine, in physiologic doses, decreases gastric secretion, but the attendant atropine effects seriously limit its usefulness. Gastro-enterostomy may or may not lower the acidity but rarely produces complete neutralization. Subtotal gastrectomy usually results in complete and permanent anacidity. The objections to its general adoption are the relatively high mortality rate and the gravity of the lesions when they do recur. Complete and continuous neutralization may be accomplished in many cases by the hourly milk and cream and alkali regimen of Sippy. Frequently, however, it seems impossible to obtain satisfactory control of the free acidity even with large doses of alkali. In spite of this fact, conservative medical therapy based on the principle of acid neutralization remains the treatment of choice for uncomplicated peptic ulcer.

MEDICAL BOOK NEWS

Edited by TASKER HOWARD, M.D., F.A.C.P.

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JUNE, 1934

REVIEWS

Treatment In General Practice

TREATMENT IN GENERAL PRACTICE. By Harry Beckman, M.D. Second Edition. Philadelphia, W. B. Saunders Company, 1934. 889 pages. 8vo. Cloth, \$10.00.

Several entities have been added to this edition, among them agranulocytosis, blackwater fever, cyanide poisoning, food allergy, hiccup, dysinsulinism, lead poisoning and a number of others. There is also the addition of a conveniently arranged section on vehicles and incompatibilities, the result of a study in the author's laboratory. The common drugs are listed, below them is a list of the remedies with which each one is incompatible and below this the proper vehicle.

As in the previous edition, the treatment is based upon the work of the authors whose names are listed in the bibliography. The author has edited and condensed this, as he states in the preface and he has done so in a very satisfactory manner.

It is very convenient to have a book of this kind where treatment is not crowded out by the other aspects of disease and where one may quickly find the latest developments in the branch which is of the greatest concern to the patient.

W. E. McCOLLOM.

Modern Treatment of Syphilis

THE MODERN TREATMENT OF SYPHILIS. By Joseph Earle Moore, M.D., Springfield, Ill., Charles C. Thomas, [c. 1933.] 535 pages. 8vo. Cloth, \$5.00.

This well printed book is a distinct addition to the literature on the treatment of Syphilis. Dr. Moore discusses the subject from all angles in a very masterly manner and gives one the benefit of not only his own experience but also that of the Co-operative Clinical Group. This group is composed of chiefs of the Syphilis Clinics in five of the leading hospitals of the United States together with representatives of the United States Public Health Service.

By the employment of subheadings the book's use as a reference work is greatly enhanced, and as the subject matter is covered in great detail any phase of the Therapy of Syphilis may be readily investigated. There is no question in the reader's mind as to what type of treatment the author thinks indicated in any particular case. Altogether it is an excellent book from every standpoint and can be highly recommended.

JOHN C. GRAHAM.

Where Is My Mother

WHERE IS MY MOTHER. By Charles G. Kerley. New York, Harrison Smith and Robert Haas, 1933. 359 pages. 16mo. Cloth, \$2.00.

Not a text-book on pediatrics, but a novel by Dr. Kerley, who has carried his knowledge of the child into literature. An indulgent father, his motherless daughter, her long stay in Europe with an unlimited expense account, a love affair, an illegitimate child,—nothing unusual so far. The child, abandoned in fact, but well provided for, never learns who is her mother. The maternal yearning of that good lady is finally satisfied when a boy whom she has thought to be her son marries the girl whom she deserted many years before. A curious tangle with an interesting denouement well worked out and creditably done. Interest is well maintained.

CHARLES A. GORDON.

Operative Surgery

OPERATIVE SURGERY. Vol. 2. The Abdomen and Rectum. By Dr. Martin Kirschner. Authorized Translation by I. S. Ravdin, M.D. Philadelphia, J. B. Lippincott, [c. 1933.] 569 pages, illustrated. 8vo. Cloth, \$12.00.

This second volume of the American edition from the pen of one of the world's master surgeons does credit to the author. This book consists of 500 odd pages with detailed descriptions of the technique of the master surgeons in the common operations within the abdominal cavity.

Every operation is richly illustrated with colored drawings which add greatly to the ease with which the reader can grasp the ideas of the authors.

It is pleasing to note that the operations are rarely described by the names of the authors (so often in dispute) but merely by the method employed.

We can say to every man doing active general surgery that this book will often be useful to have at hand as a preliminary to some difficult procedure which he is about to undertake.

We take pleasure in recommending this work to the practitioner of surgery.

ROBERT F. BARBER.

Therapeutic Agents of the Quinoline Group

THE THERAPEUTIC AGENTS OF THE QUINOLINE GROUP. Cinchophen, Plasmquine, Nupercaine, Quinine and Acridine Dyes. The Relations between their Chemical Constitution and Pharmacologic Action. By W. F. von Oettingen, M.D., New York. The Chemical Catalog Company, 1933. 301 pages, illustrated. 8vo. Cloth, \$6.00. (American Chemical Society Monograph, No. 64).

As stated by the Board of Editors the purpose of these monographs is twofold: first, to present to chemists in general the available knowledge upon the chosen topic in a readable form intelligible to those whose activities may be along a wholly different line. The second purpose is to promote research in the branch of science covered by the monograph by furnishing a well digested survey of the progress already made in that field and by pointing out directions in which investigation needs to be extended. The attainment of these aims is adequately realized by Dr. von Oettingen in his presentation of The Therapeutic Agents of the Quinoline Group. Each important member of the group is discussed from the point of view of its history; its chemic relation to the other group members; its pharmacologic action; its fate in the organism; its therapeutic use; and its toxicity. This last phase of the subject the reviewer believes to be of tremendous and, up till now, but partially appreciated importance. After wholly inadequate experimental study many now proven toxic compounds have been placed in the hands of the practitioner; and only after their wide use has the harm they may do become known.

Quite unfamiliar with the properties and effects of many of the compounds chosen for study we have based our estimation of this work on the presentation of those compounds having widest use or of particular clinical importance when the occasion for their use occurs. Such material is thoroughly and intelligibly presented.

The bibliography is extensive and a critical selection has been made of the most important papers.

For investigators in chemistry and pharmacology, for teachers of therapeutics, and for all those in the allied sciences who have an interest in the subject this volume is more than val-

able—its acquisition is a necessity. We know of no similar work of equal scope.

GEORGE H. ROBERTS.

Pathologie und Klinik der Granulosazelltumoren

PATHOLOGIE UND KLINIK DER GRANULOSAZELLTUMOREN. Von Dr. Walter Schiller. Wien, Wilhelm Maudrich, 1934. 197 pages, illustrated. 8vo. Cloth, RM. 16.00.

This excellent monograph completely reviews the status of granulosa cell tumors. This histogenesis is thoroughly reviewed from histological, clinical and experimental viewpoints. Experiments attempting to induce granulosa cell tumors in mice are recorded. Sixteen benign cases are minutely described and beautifully illustrated. The histological findings of the Call-Exner bodies are especially emphasized. The clear spaces in these structures represent the end result of hydropic degeneration in the granulosa cell; the accumulating fluid causing concentric arrangement of granulosa cells of the periphery. The diffuse, folliculoid and trabecular morphology is well described and the prominence of rosette formation is recorded. The association of this lesion with endometrial hyperplasia is again emphasized. Six malignant cases are described; the diagnosis, however, depending on local recurrences and metastases rather than upon the histological appearance. One doubtful case is noted. Four cases of carcinoma with histological resemblance to granulosa cell tumors are also shown. Only repeated sections indicated the true histogenesis of these neoplasms. The attempt to interpret granulosa like cells in ovarian teratoma is a bold step even if not histologically too fanciful. The chapter on histology is complete. Symptomatology is well recorded and correlated with the hormone function of the granulosa cell. The findings of anterior pituitary hormone in urine and blood of these patients is indicated. The value of fat stains in both endometrium and tumor is reviewed. Conclusions as to histogenesis are conservative and entirely sound. The excellence of microphotography is most commendable.

SAMUEL A. WOLFE.

Renaissance of Medicine in Italy

THE RENAISSANCE OF MEDICINE IN ITALY. By Arturo Castiglioni, M.D. The Hideyo Noguchi Lectures. Baltimore, Johns Hopkins Press, 1934. 91 pages, 12mo. Cloth, \$1.50. (Publications of the Institute of the History of Medicine, The Johns Hopkins University, Third Series, Volume I.)

This small book consists of three lectures delivered by Dr. Castiglioni, in English, before American students in this country—The Noguchi Lectures. They comprise the following:

1. The Dawn of the Renaissance in the Life, Art and Science of Italy. The Thought of Leonardo.
2. The Flowering of Medical Studies of the Italian Universities from Berengario to Cesalpino.
3. The Legacy of Scientific Renaissance and the Main Currents of Thought from Fracastoro to Galileo.

The construction is so different from the usual boring encyclopedic form adopted by other historians of medicine. His is an interesting and inspiring historical presentation, where the characters form part of the culture of that period, and are not merely individuals who found or produced something pertaining to the development of medicine.

GAETANO DE YOANNA.

De Venarum Ostioliis 1603 of Hieronymus Fabricius of Aquapendente

DE VENARUM OSTIOLIS 1603 OF HIERONYMUS FABRICIUS OF AQUAPENDENTE (1533-1619). Facsimile Edition with Introduction, Translations, and Notes by K. J. Franklin, D.M., Springfield, Ill., Charles C. Thomas, 1933. 98 pages, illustrated. 8vo. Cloth, \$3.00.

In 1928 the house of Charles C. Thomas issued an edition of Harvey's immortal "De Motu Cordis" on the three hundredth anniversary of its publication. This volume contained a photostatic copy of the text and title page, together with a new translation by Professor Leake. Later, the translation was issued as a separate work in inexpensive form for the benefit of medical students.

Thomas now brings out the important work on the veins by Harvey's old teacher at the University of Padua, Hieronymus Fabricius. Again the text and the exquisite illustrations are reproduced, and again a very satisfactory English translation of the work is offered. This is the first recorded translation in the English of any of the works of Fabricius, although his name is so familiar and some of his illustrations have been immortalized by reproduction in Harvey's treatise on the circulation of the blood. The volume also contains a brief biography of "Aquapendente," as he was sometimes called, together with a short historical background to his discovery

of the valves of the veins, and an account of the anatomical theater at Padua.

In an interesting bibliographical note the author states that this work exists bound with three other tracts of Fabricius under a general title page bearing the date 1625, but that the tract itself bears the date of 1603. Quoting Mr. Strickland Gibson of the Bodleian Library he continues: "it has been impossible to trace a copy of the work bound separately, but luckily there is presumptive evidence to indicate what constitutes a first edition." Mr. Frankenberger, the Librarian of the Medical Society of the County of Kings, Brooklyn, N. Y., informs me that he believes such a first edition is in this library. He plans shortly to present the evidence in which the criteria required by Mr. Gibson for identifying the hypothetical first edition are so completely fulfilled.

This volume makes available an important page in medical history, and will be desired by those who are interested in source material or in the history of medicine.

TASKER HOWARD.

Contagious Diseases

CONTAGIOUS DISEASES. What They Are and How to Deal With Them. By W. W. Bauer, M.D. New York, Alfred A. Knopf, 1934. 218 pages. 16mo. Cloth, \$2.00.

This little book is written to give intelligent mothers an understanding grasp of the problem of the causation, prevention and treatment of the contagious diseases. It does not aim to supplant competent medical treatment, but to enable the mother to interpret the doctor's directions more intelligently.

The material is presented in an interesting manner and in a simple and concise way. It presents logically the basis for our modern prevention and treatment of contagious diseases and describes briefly the present status of the specific measures used. The book will no doubt aid in the program of the education of the laity, an important part of the prevention of the communicable diseases. One must compliment the author on a skillful and successful presentation in this regard.

The practicing physician of today must be himself quite familiar with the modern developments in preventive medicine, if he is to avoid embarrassing questions, which a book such as this will enable parents to ask. Yet education of the laity must go on. Therefore the profession must keep abreast of it.

JOSEPH C. REGAN.

Medical Women of America

MEDICAL WOMEN OF AMERICA. A Short History of the Pioneer Medical Women of America and of a few of Their Colleagues in England. By Kate Campbell Hurd-Mead, M.D. New York, Froben Press, 1933. 95 pages, illustrated. 8vo. Cloth, \$1.00.

The author gives short interesting sketches of pioneer women physicians and the difficulties they encountered in securing a medical education in this country; and in many instances went to Europe for post-graduate study, and then returned to America to establish schools for their own sex, as many men's colleges refused to admit them.

She tells of the popularity of midwives in the early days and how it became necessary to have better educated medical women to bring comfort and sympathetic care to women who preferred this type of service.

The author has omitted many names who deserve honorable mention, because of the size of the volume. Many fields in which women are useful are mentioned, but she has omitted the field of medical jurisprudence. In some states a woman plaintiff has the right to select a woman of her own sex for examination before court procedure. Judges appoint women physicians to examine patients after which examination the doctor appears in court to testify concerning this examination.

The book tells of how times have changed and coeducation of today makes it unnecessary for the maintenance of colleges exclusively for women, one school still remains in Philadelphia.

The author has tried to show how women doctors have justified the trust left to them by the pioneers and how necessary they have become to the well being of the nation.

Every woman physician should read this volume. She will be enlightened, entertained and feel a sense of appreciation for her pioneers.

MARY E. POTTER.

More Fun In Bed

MORE FUN IN BED. The Convalescent's Handbook. Edited by Frank Scully and an All Star Cast. New York, Simon & Schuster, Inc. [c. 1934.] 238 pages, illustrated. 8vo. Cloth, \$2.00.

The frontispiece of this new book—"More Fun In Bed"—contains a list of 29 hospitals in which the author has been confined for varying periods since 1910. The author calls it his credentials. And as we perused the pages of this book we

kept turning back to this frontispiece, particularly to the note following his most recent discharge—"Feeling much better now." To us it seemed to convey a portentous meaning. The author is no longer bedridden. There is no more fun in bed.

Like its predecessor, this book has its list of outstanding personalities, such as Will Rogers, Eddie Cantor, Walter Winchell, and others too numerous to mention, but this all-star show does not seem to work to as good advantage as in the original book. Their humor is not as effortless or as spontaneous or as genuine. In this book it seems to verge on biting satire which, at times, reads like PAIN IN BED, and that is why the remark of the author—"Feeling much better now"—seemed to hold our attention. The author has gone to pains in including excerpts from the writings of Pitkin and Stevenson and others, but their remarks are serious.

However meritorious this book may be, for a really funny book the original product is the thing. For your abdominal patient, where laughter may hinder wound healing this book may be preferable. It should prove interesting for its collection of various brain-teasers from cross-word puzzles to Guggenheims, including card-tricks, anagrams, and other distracting problems.

EMANUEL KRIMSKY.

Organism of The Mind

THE ORGANISM OF THE MIND. An Introduction to Analytical Psychotherapy. By Gustav Richard Heyer, M.D. Translated by Eden and Cedar Paul. New York, Harcourt, Brace and Company, 1934. 271 pages. 8vo. Cloth, \$3.50.

This book is a translation from the German. It is divided into two parts. The first part gives a description of the author's conception of the personality which he depicts as being evolved from four cycles. These he calls the vegetative vital cycle of nutrition, the animal vital cycle of circulation, the pneumatic vital cycle of respiration and the mental vital cycle, respectively. This part of the book attempts to show the interrelationships of these various organic processes as they affect behaviour. It also discusses treatments by suggestion, auto-suggestion, and abreaction.

The second part of the book discusses the importance and the influence of the unconscious and gives the author's appraisal of the various psychoanalytical methods; namely, those of Freud, Adler and Jung. The author gives due credit to both Freud and Adler, but is simultaneously critical of them, while he is partial to Jung. The book has attached 37 plates taken from colored paintings by patients who have been analyzed according to the Jung theories and a description of same in their bearing upon the patient's personality. The first part of the book is by far the better. The ideas are novel and the style light though somewhat redundant, the material being illustrated by some of the author's own cases. The author has considerable experience with psychotherapeutic endeavor and gives a fairly good appraisal of modern psychotherapeutic procedures. The book furnishes some valuable suggestions to physicians interested in psychotherapy.

JOHN M. SCHIMMENZI.

Quinografia Cardiaca en Clinica

QUINOGRAFIA Cardiaca en Clinica. By Dr. Duran Arrom. Barcelona, Spain, Claraso, 1933. 71 pages, illustrated. 8vo.

Dr. Arrom is a proponent of the kymographic method in the study of cardiological conditions. In his opinion it has certain advantages over the electrocardiograph particularly in reference to the systolic-diastolic phases, the clear distinction of aorta, left auricle and pulmonary artery, the more exact determination of the G point and the differential diagnosis of extrasystoles and arrhythmias. The tracings are made in combination with x-ray motion pictures of the heart. The monograph is well illustrated with plates and tracings to amplify the text and will prove of interest to cardiologists who read Spanish.

PHILIP FRANK.

Nature and Treatment of Amentia

NATURE AND TREATMENT OF AMENTIA. By L. Pierce Clark. Baltimore, William Wood and Company, 1933. 306 pages, 8vo. Cloth, \$4.25.

The purpose of this book is to utilize the principles of psychoanalysis in the treatment of mental arrest. In the introduction, there is a survey of the theories presented by the Freudian school. There then follows a discussion on the problems in Amentia. The author indicates that a majority of cases of mental arrest are due to a failure in the inheritance of a good germ plasm or constitutional defect as in the neurones. "Whether this be in the germ cell or in the develop-

ment of the neurones, we may at least say that the total ego is without some degree of its usual endowment for meeting reality."

In the idiot the primary Narcissism is continued beyond the age of childhood. The author shows through case analysis in the idiot and feeble minded how psychoanalytic technique may aid in the development of these children. There is an analysis of the social behavior of the ament and finally a discussion of the present and the future outlook for these individuals. There is a suggestion that study of the ego-structure and its dynamic components may be utilized to gain greater insight into the plight of the retarded individual.

This book is quite stimulating and interesting because it leads to consideration of a new method of procedure in a condition which has usually been looked upon as quite hopeless.

STANLEY S. LAMM.

BOOKS RECEIVED

Books received for review are acknowledged promptly in this column; we assume no other obligation in return for the courtesy of those sending us the same. In most cases, review notes will be promptly published shortly after acknowledgment of receipt has been made in this column.

HEREDITY AND THE SOCIAL PROBLEM GROUP. By E. J. Lidbetter. Volume I. New York, Longmans, Green & Company, 1933. 160 pages. 4to. Cloth, \$7.50.

THE PRACTICAL MEDICINE SERIES. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Series 1933. The 1933 Year Book of General Therapeutics. Edited by Bernard Fantus, M.D. Chicago, The Year Book Publishers, [c.1933.] 464 pages, illustrated. 12mo. Cloth, \$2.25.

ESSENTIALS OF HOSPITAL PRACTICE. By Royall M. Calder, M.D. Durham, N. C., Duke University Press, 1934. 262 pages. 12mo. Fabricoid, \$2.75.

GENEALOGY OF SEX. By C. Thesing, M.D. New York, Emerson Books, Inc., 1934. 320 pages, illustrated. 8vo. Cloth, \$5.00.

WHY DIE BEFORE YOUR TIME? By Henry S. Williams, M.D. New York, Robert M. McBride & Company, 1934. 232 pages. 12mo. Cloth, \$2.00.

MEDICINE—A VOYAGE OF DISCOVERY. By Josef Löbel, M.D. New York, Farrar & Rhinehart, Inc., [c. 1934.] 334 pages. 8vo. Cloth, \$3.00.

INSANITY AS A DEFENSE IN CRIMINAL LAW. By Henry Weisfen. New York, The Commonwealth Fund, 1933. 524 pages. 8vo. Cloth, \$3.75.

BRUCELLA INFECTIONS IN ANIMALS AND MAN. Methods of Laboratory Diagnosis. By I. Forest Huddleson. New York, The Commonwealth Fund, 1934. 125 pages, illustrated. 8vo. Cloth, \$2.25.

DIE HAUT- UND GECHLECHTSKRANKHEITEN. Hrsg. von Prof. Dr. Leopold Arzt und Prof. Dr. Karl Zieler. Doppel-Lieferung 13/14. Pages 739 to 1062, illustrated. Berlin & Wien, Urban & Schwarzenberg, 1934. 8vo. Paper, RM, 16.30.

THE HOSPITAL MANUAL OF OPERATION. By Warren P. Morrill, M.D. New York, Lakeside Publishing Company, [c. 1934.] 315 pages, illustrated. 8vo. Cloth, \$3.00.

SURGICAL PATHOLOGY OF THE MAMMARY GLAND. By Arthur E. Hertzler, M.D. Philadelphia, J. B. Lippincott Company, [c. 1933.] 283 pages, illustrated. 8vo. Cloth, \$5.00.

SURGICAL CLINICS OF NORTH AMERICA. Vol. 13, No. 2 (New York number). April, 1934. Issued serially one number every other month by the W. B. Saunders Company, Philadelphia and London. Per Clinic Year (6 nos.) Paper \$12.00. Cloth, \$16.00.

SURGICAL PATHOLOGY OF THE GENITO-URINARY ORGANS. By Arthur E. Hertzler, M.D. Philadelphia, J. B. Lippincott Company, [c. 1931.] 286 pages, illustrated. 8vo. Cloth, \$5.00.

Contemporary Progress

(Concluded from page 190)

iris. Two sutures are placed in the conjunctival flap. Pilocarpine is instilled into the eye at each dressing; the eye is dressed every forty-eight hours and the sutures removed at the second dressing. Three of the author's 4 cases and the case reported by Hughes were operated by this method with satisfactory results. For successful operation the case should be of the chronic type without any iritic reaction, the defect not more than one-half the basal attachment of the iris, and the character of the iris section should be such as to maintain its shape and fairly normal structure.

Blood Culture Studies in Iritis

E. F. Traut (*American Journal of Ophthalmology*, 17:106-109, February, 1934) reports blood cultures in 5 cases of iritis. A modification of Clawson's technique for studying streptococci in the blood was used in making the culture. Of the 5 patients studied, 2 had their first attack of iritis when the study was made, 3 had the recurrent form. In all cases the organisms cultured from the blood were pleomorphic streptococci and re-

sembled those cultured from the blood of chronic arthritics. Two of the 5 patients with iritis had had arthritis; in the other 3, the iritis followed an acute upper respiratory disease; in one of the latter the patient had syphilis, but whether the syphilis was a factor in producing the iritis is "a moot point not easily settled." The author notes that the term rheumatism today is given a broad meaning and includes not only rheumatic fever and various forms of chronic infectious arthritis (not due to syphilis, gonorrhea and tuberculosis) but also such conditions as myositis, fascitis, bursitis, carditis, chorea, and infectious neuritis; in this group, the author has always included endogenous iritis not definitely due to syphilis, tuberculosis, gonorrhea, or diabetes. The blood culture findings in the 5 cases reported tend to confirm his belief that the usual recurrent non-specific iritis is a "rheumatism of the eye."

Ocular Changes Accompanying Disturbances of Calcium-Phosphorus Metabolism

S. N. Blackberg and A. A. Knapp (*Archives of Ophthalmology*, 11:665-669, April, 1934), in experiments on young dogs, found that these animals, when fed on a rachitogenic diet, showed definite ocular changes. In the early stages of rickets, after approximately six weeks of the diet, the eye symptoms noted were prominence of the eye, ectasia of the cornea, increased lacrimation, conjunctival congestion and a circum-corneal ring of episcleral injection. As the diet was continued and the rachitic condition advanced, the protrusion of the cornea became more marked, and corneal ulcers developed, involving chiefly the lower two-thirds of the cornea. Lenticular opacities were also observed in the first two months, at first small and punctate, later larger and confluent, until finally the lens had the appearance of a mature cataract. While the fundus was still visible, degenerative areas were observed. The authors note that these rachitic animals showed marked dental decay, as well as the ophthalmological changes. As clinically conical cornea is often associated with dental disease, it is suggested that the same etiological factor may be responsible for both conditions in man, i.e., a disturbance of the calcium-phosphorus metabolism.

Symptoms of Hidden Ocular Muscle Imbalance

F. W. Marlow (*New England Journal of Medicine*, 210:309-313, Feb. 8, 1934) notes that there are a number of cases in which symptoms suggesting eye strain persist after correction of refractive errors and manifest muscle imbalance. The chief eye symptoms in these cases are photophobia and asthenopia; headache, commonly frontal and occipital, is one of the most common symptoms, sometimes accompanied by pain or stiffness in the back of the neck; neurasthenia, nervous indigestion or severe gastric upsets with nausea and vomiting with or without headache, are also common symptoms. As the usual test for ocular muscle imbalance is the temporary occlusion of one eye, the author has found that the best method for diagnosis of hidden muscle imbalance is the prolongation of this occlusion test, keeping one eye covered for a week at least. When errors of muscle imbalance are demonstrated by this test and corrected, the author has found that all symptoms are usually promptly relieved.

Streptococci and Pneumococci in Eye Pathology

H. Schmelzer and E. Eckstein (*Archiv für Ophthalmologie [v. Graefe]*, 132:20-33, March 17, 1934) in their bacteriological study of 547 cases of ocular infection at Erlanger (Germany) found that: Approximately two-thirds of the cases of *ulcus serpens* were due to pneumococci; these cases were the most severe and difficult to treat successfully. Only 17 per cent. were due to green-producing streptococci; the cases in this group were of a mild type. In lacrimal sac suppurations, pneumococci also predominated over streptococci, but operative procedures gave good results in both types. In acute conjunctivitis, streptococci, usually of the green-producing type, were found in the great majority of cases, pneumococci in only a relatively small percentage; the determination of the infecting organisms was not found to be of importance in determining the treatment in these cases, as all types yielded readily to treatment with the usual astringents. In spite of all precautions there were 5 cases of postoperative wound infection in 275 cataract operations; in none of these were the infecting organisms either pneumococci or streptococci. As it is often difficult to differentiate pneumococci from streptococci in smears, the authors recommend the use of cultures.

If a patient wants a consultation grant it quickly. After all, the man who fears a consultation is the one who is not sure of himself.

The Restoration of the General Practitioner

DEAN LEWIS, Baltimore, (*Journal A. M. A.*, March 31, 1934), points out that during the economic depression the general practitioner (consultant) has fared better than the specialist, for more people have discovered that they could be treated in their homes; his overhead has not been high. Many consultants have changed their point of view and have descended to make house calls. So, as far as medicine is concerned, the economic depression has automatically restored some of the old order. The author believes that the restoration of the doctor should begin in the medical school as he should know how to make a diagnosis, he should know the natural course of disease and how to observe it, and he should know what therapeutic measures should be instituted to meet the indication and when they are to be employed. During the past few years, emphasis has been laid on the laboratories. This was necessary because such rapid strides had been made in biochemistry, biophysics, bacteriology and the histologic examination of tissue. The laboratories have been obtained and now more stress should be laid on the clinic. More clinical material is required, for in modern medical teaching the technic of diagnostic procedures is no longer simply demonstrated; but they are learned by the students and practiced by the student until these procedures can be used independently. In teaching hospitals an endowment should provide the required number of free beds and the patient should be the patient of the student, who under strict supervision can assume charge. This is not possible under any scheme in which the patient pays full or half rates. The medical training which many students now receive makes the doctor dependent on hospitals, laboratories technicians, nurses, consultants and specialists. These distinctly influence the attitude of students and have a deciding influence in the development of specialism. The importance of physical examinations cannot be overemphasized, for the student of medicine who observes well, percusses well, hears acutely and feels intelligently has advanced far in the way of diagnostic ability. With a due apportioning of diligence, the essentials of anatomy, physiology and pathology can be mastered. During the brief years of pupilage the details of the various branches cannot be grasped so that all cases can be accurately diagnosed and successfully treated. A deep knowledge of pathology is the foundation stone of diagnostic ability. Every effort should be made to bring these practitioners into contact with hospital facilities. Unfortunately, at the present time many of these men from the day they begin practice are excluded from hospital services. The medical profession is largely to blame for the development of specialism and the eclipse of the doctor, for during the past few years the patient has been educated to believe that the specialist is the last word, and as a result patients consult specialists first rather than the doctor. The licensing of specialists or the recognition of certain qualities which specialists should have will limit considerably their number and increase the number of doctors.

Acute Disseminated Encephalomyelitis: Its Clinical Manifestations and Sequelae

RICHARD E. STROUT and LOUIS J. KARNOSH, Cleveland (*Journal A. M. A.*, Aug. 26, 1933), present an analysis of twenty-eight cases of acute disseminated encephalomyelitis. By far the most consistent features of the early stage of encephalomyelitis are sensory derangements and muscular weakness. Peripheral neuritic sensory impairment and neuralgic pains and the progression of symptoms in the chronic stage suggest that the causative agent of this disease, as that of epidemic encephalitis, is present and active in the nervous system beyond the period of the acute symptoms. The similarity of the clinical picture in the convalescent or residual stage to that of multiple sclerosis may be striking in some cases. Other cases with spasticity, muscular atrophy and fibrillary twitching may closely simulate amyotrophic lateral sclerosis. A third group with posterolateral involvement of the spinal cord and peripheral neuritis resembles combined toxic disease of the spinal cord. When neuralgic pains or gross sensory defects persist and are accompanied by spasticity and muscle weakness, the diagnosis of acute disseminated encephalomyelitis must be considered, and the history of an acute phase carefully explored. In many cases a retrospective diagnosis can be made. Five of the authors' patients have already shown relapsing features, but these were slight in some instances. Nevertheless, evidence is accumulating to show that the occurrence of a relapse does not exclude the diagnosis of encephalomyelitis. As Bassoe commented, both clinical and anatomic studies render the distinction between disseminated encephalitis and multiple sclerosis more obscure and threaten to break down cherished boundary lines. Not only are residual phenomena and relapsing tendencies of encephalomyelitis more common than was indicated by early reports, but their nature is as diversified as that of the acute phase itself.

